THiNK active

EuropeActive's Research Centre

Understanding the social and economic value of an incredible industry...

a THiNK Active report

Jimenez, A., Nieto, I., Mayo, X., Reece, L., Davies, L.

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Authors:

Prof. Alfonso Jiménez
Professor of Exercise Science & Health
Head of THiNK Active Research Centre, Centre for Sport Studies, King Juan Carlos University
Principal Investigator GO fit LAB

Dr. Inés Nieto
Senior Research Fellow
THiNK Active Research Centre, Centre for Sport Studies, King Juan Carlos University

Dr. Xián Mayo
Assistant Professor
THiNK Active Research Centre, Centre for Sport Studies, King Juan Carlos University
Secretary THiNK Active Scientific Advisory Board

Dr. Lindsey Reece
Adjunct Fellow, University of Sydney
Member THiNK Active Scientific Advisory Board

Prof. Larissa Davies
Professor of Applied Sports Economics
Sport Industry Research Group, AWRC-Sheffield Hallam University
Chair THiNK Active Scientific Advisory Board

Contributor:

Steven Ward (Chapter #4 author)
Strategy & Innovation Director
GO fit Life, Science and Technology, S.A.

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Preface

Our Sector's New Frontiers

A year has passed since the first ordinary European Health & Fitness Forum (EHFF) after the corona lockdowns. In April 2022 we were very positively surprised how eagerly our members, partners and various stakeholders from across Europe and the world wanted to come together again and recreate normality after two very abnormal years. As we are just about to embark on a new and even greater FIBO Week, and celebrate the 10th EHFF, consumer demand for personalised health and fitness services keeps growing. Many market indicators show that the European fitness and physical activity market is not only bouncing back, but is bouncing beyond its pre-corona reach.

Industry associations across Europe ensure our representation at the political level more effectively than ever before and we will finally this year, for the first time in our history, establish global representation for our industry in the form of World Active. Clearly, in many ways things are going significantly better for our sector than many predicted during the two years of periodical corona lockdowns. And evidently the disruption of the pandemic sparked lots of courage and creativity to proactively transform the fitness and physical activity sector for the future. This transformation is perhaps most clearly visible in the remarkable digitisation and tech innovation, which is changing the structures of our ecosystem in a consumer-centric direction.

Another area where we have seen significant positive change is in terms of data-collection and research for our sector. The pandemic showed us indisputably during 2020 – 2022 that our industry needed to invest much more in the public affairs work, the political muscles of our sector's representative trade associations. That was a clear necessity in order to be heard and recognised as a sector in the political debate about the essentiality and relevance for society of each industry. But what also became very clear was that without reliable data, and academically valid research based on that data, the arguments in favour our sector's place in society would be ineffective politically.

One of our sector's 'new frontiers', beyond which lies great new market opportunities and remarkable impact on societal health, is collection and assessment of reliable data for our sector and academic research conducted on that basis. EuropeActive's stated ambition to build the European sector's common research centre and thinktank, in the form of THiNK Active, will truly materialise in the coming years as resourcing increases and partnerships with universities in Europe and beyond unfold their substantial potential.

The second great assignment of THiNK Active, after the SafeACTiVE research project, is the socio-economic research presented in the report at hand. Prof. Alfonso Jimenez, Head of THiNK Active, and his team has titled it Understanding the social and economic value of an incredible industry. The version at hand is the first in a series of studies and reports under the aforementioned title, which aim to comprehensively evidence our industry's social value and societal impact. To ensure the reliability of the data assessed in the study and the validity of its analysis and findings, THiNK Active has worked closely with partner universities in Europe and Australia, as well as with EuropeActive's data-collection partner 4global.

The ambition is to expand the study's scope across Europe in the coming months and years and to work with partner universities around the world to eventually deliver a global socio-economic impact study and report for our industry. We find that Understanding the social and economic value of an incredible industry is exactly the right large-scale research project for THiNK Active to undertake as our sector moves out of the shadow of Covid-19. EuropeActive's main objective with this study is to provide reliable ways to measure and evidence our sector's positive impact in society in a holistic sense. The study will undoubtedly be a powerful tool to strengthen our industry's voice in political decision-making and to legitimise its importance with regards to societal health in the future.

In addition to our appreciation of the work of THiNK Active's research team and university partners, we are profoundly grateful for the continuous support of the Members of EuropeActive's President's Councils, generously providing funding for THiNK Active and the European DataHub. Furthermore, Basic-Fit and its Founder and CEO, René Moos, has once again showed admirable generosity and leadership by funding, as our principal sponsoring partner for this THiNK Active study, research and public affairs work that strengthens our sector's place and image in society.

5th April 2023

Andreas Paulsen
CEO of EuropeActive

with the support of

Executive summary

The conditions created by the COVID-19 pandemic raised the importance of physical activity. In lockdown guidelines across Europe, supporting physical activity remained one the of key priorities. This is because of the breadth of evidence – some of it outlined in previous THiNKactive papers and reports (Jimenez, Mayo, Copeland, 2020a[1]; Jimenez, Mayo, Copeland, 2020b[2]; Jimenez et al, 2020c[3]; Jimenez et al., 2021[4]) – **that physical activity is good for us all.**

The challenge we made back in June 2020 to the health and fitness sector is still pending:

Let´s take this opportunity to champion a fundamental transformation in the way in which policy makers and the public perceive the value and contribution of the physical activity and fitness sector to social and economic outcomes.

If we are willing to take this opportunity (becoming a proactive and responsible health and fitness industry) we need to build a collective action integrating the resources, infrastructure, and intellectual capacity to do it right.

As you will see in detail in this report, during the last 18 months we have developed a unique data infrastructure to collect high-quality robust data on business performance, market penetration, consumer behaviour, economic impact, and social value. The European DataHub project, developed in partnership with 4Global, is the ***instrumental tool*** to make it happen.

But we need to complete a second parallel step to get this right. We ***must develop our intellectual capabilities and expertise*** to analyse this data and report robust and solid outcomes about our value for society.

The content included in this report will help to understand our incredible value potential for society (see figure #1 in page 9). Based on the most updated evidence, we will move from a detailed analysis of the policy context and its implications, into the discovery of the different areas and domains in which our industry is making a positive impact in society (health-care savings from better physical and mental health, macroeconomic positive impacts, academic achievement and individual capital development, social cohesion and crime prevention, subjective wellbeing perception). Moreover, we will discuss the critical value coming from our positioning regarding the environment, governance, and sustainability (EGS), especially considering access to capital investment.

After that we will introduce you into the amazing world of understanding the key methodological issues to deliver high-quality and robust evidence regarding social value (because everything is about the numbers…). And we are involved in a world-class international effort led by THiNKactive to develop an International Consensus on Social Return on Investment (SROI) for physical activity and sports participation.

1 Jimenez, A., Mayo, X., Copeland, R.J. (2020a). ***The Economic and Social Impact of promoting active living after the COVID-19 crisis. The role, value and impact of a proactive and responsible health and fitness industry".*** EuropeActive, Brussels, June 2020. DOI: 10.13140/RG.2.2.33005.61927

2 Jimenez, A., Mayo, X., Copeland, R.J. (2020b). ***The positive impact of physical activity and exercise on immune function; The critical prevention and recovery tool to fight a second wave of COVID-19.*** EuropeActive THINK active, Brussels. DOI: 10.13140/RG.2.2.20083.96800

3 Jimenez, A., Mayo, X., Lopez-Valenciano, A., Dalton, C., Del Villar, F. Luque, A., Broughton, I., Wade, M., Shakespeare, J., Copeland, R.J. (2020c). ***An independent assessment of COVID-19 cases reported in fitness clubs and leisure facilities across Europe: a THINK active report.*** EuropeActive, Brussels, v.1.1. 17th December, 2020. DOI: 10.13140/RG.2.2.13203.71207

4 Jimenez, A., Mayo, X., Lopez-Valenciano, A., Dalton, C., Del Villar, F. Luque, A., Broughton, I., Wade, M., Shakespeare, J., Copeland, R.J. ***SafeACTiVE Study #2: An independent assessment of COVID-19 cases reported in fitness clubs and leisure facilities across Europe: a THINK active report.*** EuropeActive, Brussels, v.1.1. 16th December, 2021. DOI: 10.13140/RG.2.2.15619.78883

Finally, we will present the European DataHub project and platform for data collection and analysis and reporting, followed by some final relevant closing remarks.

Along the document you will identify some ***key messages in dedicated boxes*** to help you to reflect on the information presented and discussed, so your understanding about the value and impact of this unique project will build.

We are aware that this report is dense in some parts, and it includes a significant amount of references (179 in total) for you to explore further, and learn more. But it provides a unique opportunity to engage all industry stakeholders in a new transformative journey about our impact and value for society…

Once you have completed its reading, you will have had time to reflect on the information presented. In turn, this is likely to have developed and informed your understanding of the value and impact of our industry.

#1. Introduction

Why we wrote this report?

In a critical report published in June 2020 (Jimenez, Mayo, Copeland, 2020[5]), in the middle of the COVID19 storm of lockdowns across the world, we discussed extensively about the need for ***a more proactive, responsible, and sustainable industry***. An industry able to receive credit and recognition because of its positive impact on society, and one able to provide solid evidence about its performance, economic impact and social value.

As a result of the strategic vision articulated in this report, and several discussions with industry leaders, fellow Board members at EuropeActive Board, industry stakeholders, and top academics across EU THiNKactive[6] was born…

Established in September 2020 by the Board of Directors of **EuropeActive**, and supported by the President´s Council for Operators, THiNKactive is the new Research Centre of EuropeActive. A unique project to provide evidence and promote best practices for the fitness and physical activity sector across Europe and beyond. The European Fitness and Physical Activity sector is committing resources in the development of the evidence-base supporting our capacity to deliver meaningful and sustainable public health outcomes.

And THiNKactive mission was defined as follows: "To champion a fundamental transformation in the way in which policy makers and the public perceive the value and contribution of the fitness and physical activity sector to social and economic outcomes".

If we look back briefly, the Health and Fitness Industry, and especially EuropeActive, has been meaningfully engaged (since 2007) in promoting active lifestyles and healthy behaviors in partnership with Governments across Europe. Significant funding support has been received from the European Commission in that regard (EuropeActive, 2011). Moreover, the health and fitness sector, represented by EuropeActive, recognises its responsibility to work with partners at all levels across the European Union to create a healthier society. It is our collective mission to create the conditions whereby living an active lifestyle is the social norm, rather than an exception to help prevent and manage disease.

Despite the capacity, willingness, and track record of the fitness sector across Europe in promoting physical activity, the sector is rarely recognised in national governments' physical activity promotion strategy or campaigns. This needs to change.

Part of the problem here is that the *Health and Fitness Industry has failed to invest sufficient resources in the development of the evidence-base supporting its capacity to deliver meaningful and sustainable public health outcomes. In addition, rarely are the wider economic and social impacts of physical activity and sport explored or reported. This undermines the potential contribution that the sector can make in terms of addressing a broad range of health and social issues across multiple public policy areas, through sport. Where evidence does exist, more can be done to effectively communicate the value of sport to the wider public health agenda.*

The conditions created by the COVID-19 pandemic raised the importance of physical activity. In lockdown guidelines across Europe, supporting physical activity remained one the of key priorities. This is because of the breadth of

5 Jimenez, A., Mayo, X., Copeland, R.J. ***The Economic and Social Impact of promoting active living after the COVID-19 crisis. The role, value and impact of a proactive and responsible health and fitness industry".*** EuropeActive, Brussels, June 2020. DOI: 10.13140/RG.2.2.33005.61927

6 https://www.europeactive.eu/news/europeactive-successfully-launches-its-think-active-project

evidence – some of it outlined in previous THiNKactive papers and reports (Jimenez, Mayo, Copeland, 2020a[7]; Jimenez, Mayo, Copeland, 2020b[8]; Jimenez et al, 2020c[9]; Jimenez et al., 2021[10]) – that physical activity is good for us all.

The challenge we made back in June 2020 to the health and fitness sector is still pending: ***Let´s take this opportunity to champion a fundamental transformation in the way in which policy makers and the public perceive the value and contribution of the physical activity and fitness sector to social and economic outcomes.***

If we are willing to take this opportunity (becoming a proactive and responsible health and fitness industry) we need to build a collective action integrating the resources, infrastructure, and intellectual capacity to do it right.

During the last 18 months we have developed a unique data infrastructure to collect high-quality robust data on business performance, market penetration, consumer behaviour, economic impact, and social value. The **European DataHub** project, developed in partnership with 4Global, is the ***instrumental tool*** to make it happen. And the good news is that some of our industry leading operators are already integrated sharing data in real time.

But we need to complete a second parallel step to get this right. We ***must develop our intellectual capabilities and expertise*** to analyse this data and report robust and solid outcomes about our value for society.

As briefly highlighted at the executive summary, the following chapters in this report will help to understand our incredible value potential (see figure #1). Based on the most updated evidence, we will move from a detailed analysis of the policy context and its implications (chapter #2), into the discovery of the different areas and domains in which our industry is making a positive impact in society, in chapter #3 (health-care savings from better physical and mental health, macroeconomic positive impacts, academic achievement and individual capital development, social cohesion and crime prevention, subjective wellbeing perception).

Moreover, at chapter #4 we will discuss the critical value coming from our positioning regarding the environment, governance, and sustainability (EGS), especially considering access to capital investment.

Chapter #5 will introduce you into the amazing world of understanding the key methodological issues to deliver high-quality and robust evidence regarding social value (because everything is about the numbers…). And we are involved in a world-class international effort led by THiNKactive to develop an International Consensus on Social Return on Investment (SROI) for physical activity and sports participation.

Finally, chapter #6 will present the European DataHub project and platform for data collection and analysis and reporting, followed by some final relevant closing remarks.

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7 Jimenez, A., Mayo, X., Copeland, R.J. (2020a). ***The Economic and Social Impact of promoting active living after the COVID-19 crisis. The role, value and impact of a proactive and responsible health and fitness industry".*** EuropeActive, Brussels, June 2020. DOI: 10.13140/RG.2.2.33005.61927

8 Jimenez, A., Mayo, X., Copeland, R.J. (2020b). ***The positive impact of physical activity and exercise on immune function; The critical prevention and recovery tool to fight a second wave of COVID-19.*** EuropeActive THINK active, Brussels. DOI: 10.13140/RG.2.2.20083.96800

9 Jimenez, A., Mayo, X., Lopez-Valenciano, A., Dalton, C., Del Villar, F. Luque, A., Broughton, I., Wade, M., Shakespeare, J., Copeland, R.J. (2020c). ***An independent assessment of COVID-19 cases reported in fitness clubs and leisure facilities across Europe: a THINK active report.*** EuropeActive, Brussels, v.1.1. 17th December, 2020. DOI: 10.13140/RG.2.2.13203.71207

10 Jimenez, A., Mayo, X., Lopez-Valenciano, A., Dalton, C., Del Villar, F. Luque, A., Broughton, I., Wade, M., Shakespeare, J., Copeland, R.J. ***SafeACTiVE Study #2: An independent assessment of COVID-19 cases reported in fitness clubs and leisure facilities across Europe: a THINK active report.*** EuropeActive, Brussels, v.1.1. 16th December, 2021. DOI: 10.13140/RG.2.2.15619.78883

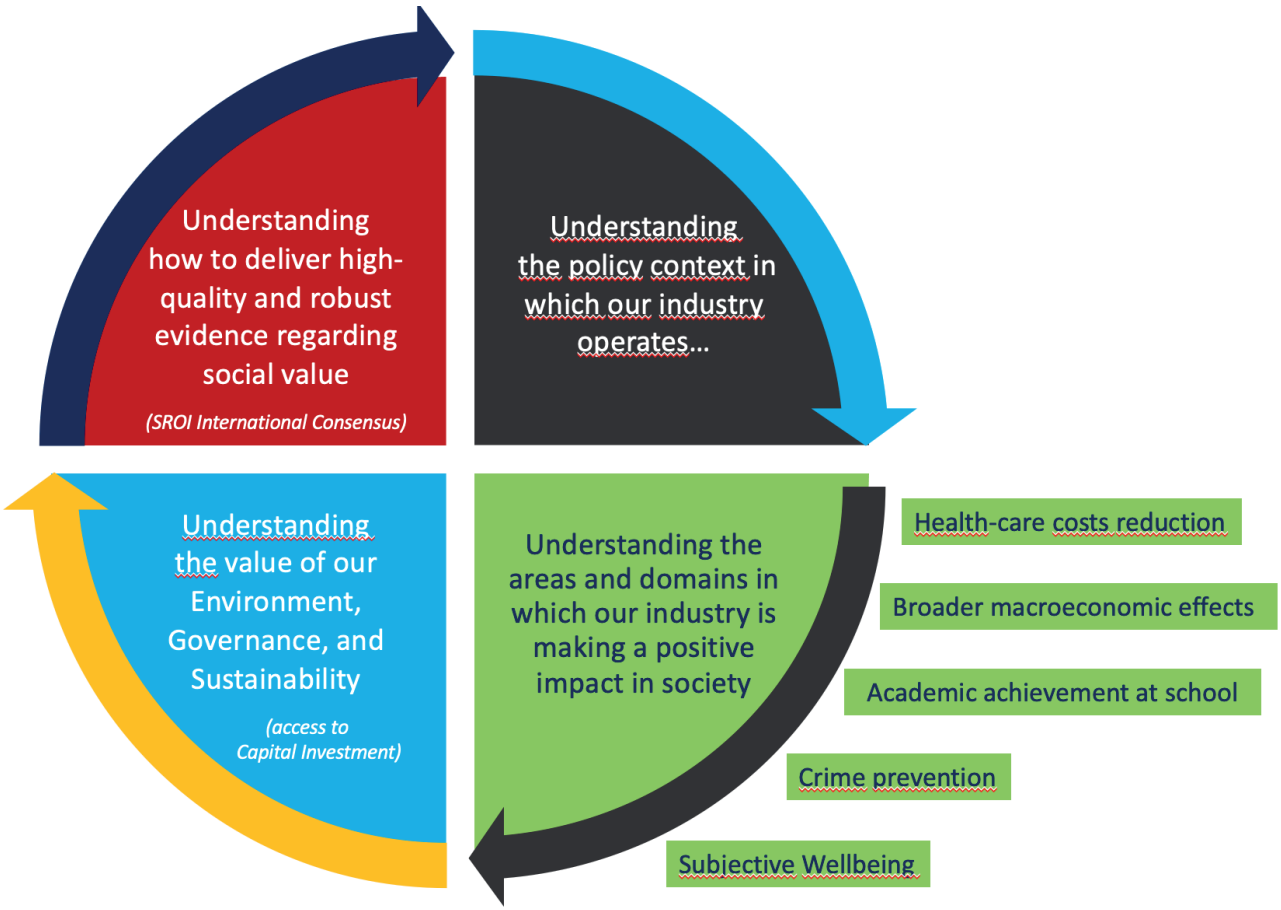

Figure #1: Understanding our incredible value as an industry with high potential.

Along the document you will identify some ***key messages in dedicated boxes*** to help you to reflect on the information presented and discussed, so your understanding about the value and impact of this unique project will build.

We are aware that this report is dense in some parts, and it includes a significant amount of references (179 in total) for you to explore further, and learn more. But it provides a unique opportunity to engage all industry stakeholders in a new transformative journey about our impact and value for society…

Your next step will be to formally become a part of the European DataHub, sharing high-quality data so we can provide insights, benchmarks, and a solid body of evidence to inform policy and interact with Governments and society as a proactive, responsible and sustainable industry….

We hope you will enjoy the reading and will help harnessing a collective call to action…

#2. The policy context

Global policy drivers supporting the recognition of the value of our industry for society…

A synthesis of current policies and strateges provide essential framing for the promotion of physical activity and sport. In short there are many global and national strategies that provide a platform for policymakers to advocate and build localised strategies around. The key for our industry engagement with those is consistency, accountability and sustainability, starting with a proper analysis of what is already there...

As highlighted at a recent OECD-WHO Europe Report (2023)[11], the majority of physical activity policy documents launched before 2010 dealt either with health-related behaviours in general or with nutrition and physical activity combined (Gelius et al., 2021)[12]. Due to increasingly conclusive evidence regarding physical activity as a significant health determinant, ***there are growing policy making efforts aimed specifically to increase population-level physical activity***, both at national and at international level (OECD-WHO Europe, 2023).

The executive summary of the OECD/WHO Europe report includes the following key messages that are especially relevant to put in context the scope of our report and the expected impact from our industry in society:

- Increasing physical activity levels can have considerable health and economic benefits, including an increase in life expectancy, fewer cases of NCDs, and lower health care expenditure.
- Despite many countries having stepped up their efforts to promote physical activity, there remain gaps in the policy response. For example, schemes to promote active travel to school or work are only present in 14 and 17 out of 27 EU Member States, respectively.
- A wide range of policy options exist to increase population physical activity, which improve population health, as well as reduce health care expenditure, including:
- setting-specific programmes, in schools, workplaces and the health care system
- policies to increase access to sports facilities
- urban design, environment, and transport policies
- communication and information policies
- As physical activity is a complex behaviour, a comprehensive package of policies is needed to target all its drivers at the same time, with sufficient and sustained funding and evaluation.
- A policy package aimed at increasing physical activity, implemented in 36 countries, would save around EUR 14 billion in health cost by 2050 (equivalent to the total annual health care expenditure of Greece) and return EUR 1.7 for every EUR 1 invested (OECD-WHO Europe, 2023).

The World Health Organization (WHO) published in late 2020 global guidelines on physical activity and sedentary behavior[13]. These guidelines acknowledge and endorse the many benefits of physical activity to individual health

11 OECD/WHO (2023), ***Step Up! Tackling the Burden of Insufficient Physical Activity in Europe***, OECD Publishing, Paris, https://doi.org/10.1787/500a9601-en.

12 Gelius, P. et al. (2021), "Policy Instruments for Health Promotion: A Comparison of WHO Policy Guidance for Tobacco, Alcohol, Nutrition and Physical Activity", ***International Journal of Health Policy and Management***, https://doi.org/10.34172/ijhpm.2021.95.

13 Bull F, Al-Ansari SS, Biddle S, et al. World Health Organization 2020 Global Guidelines on physical activity and sedentary behaviour. ***Br J Sports Med***. 2020;54(24). doi:10.1136/bjsports-2020-102955

and well-being, including a reduced risk of noncommunicable diseases, as well as improved mental health, sleep, and cognitive function. In addition, improvements made to population levels of physical activity can contribute to other key international agendas, including the 2030 Agenda for Sustainable Development[14].

In 2018, the WHO published the ***Global Action Plan on Physical Activity 2018–2030***[15]. This document set a global target for a 15% reduction in physical inactivity by 2030. This global action plan outlines a wide range of actions across multiple sectors and settings, including schools, health care, transport, urban planning, public education, sport, communities, and workplaces. However, advocacy efforts will be required to engage each of these sectors and settings and encourage implementation of the actions outlined in the plan[16]. The WHO GAPPA responded to the requests by countries for updated guidance, and a framework of effective and feasible policy actions to increase physical activity at all levels. It also responded to requests for global leadership and stronger regional and national coordination, and the need for a whole-of-society response to achieve a paradigm shift in both supporting and valuing all people being regularly active, according to ability and across the life course.

At chapter #2 of the GAPPA document sport is recognized as an underutilized yet important contributor to physical activity for people of all ages, in addition to providing significant social, cultural, and economic benefits to communities and nations (Lindsey, Chapman, 2017[17]; IOC; 2020[18]). While sport can be a catalyst and inspiration for participation in physical activity (Khan et al., 2012[19]), the sports sector is also a significant employer and a key driver of tourism and infrastructure globally. Sport and active recreation can also contribute in emergency and crisis situations as part of humanitarian programmes aimed at health and social needs, as well as community development and integration[20]. Strengthening access to, and the promotion of participation in, sports and active recreation, across all ages and abilities, is an important element of increasing population levels of physical activity (a good example to review are the ISPAH Eight Investments that work for Physical Activity, 2021[21], and Milton et al., 2021[22]).

The WHO ***Guidelines on Physical Activity and Sedentary Behaviour*** (2020) and the ***Global Action Plan on Physical Activity 2018–2030*** are landmark documents which summarize the evidence and set the global direction for increasing population levels of physical activity. However, neither document was specifically created as an advocacy tool to increase engagement in the physical activity agenda or encourage increased investment and action.

As a tool for aligning international and national policy in the fields of physical education, physical activity and sport with the United Nations 2030 Agenda, the Kazan Action Plan, KAP (UNESCO, 2017)[23] addresses the needs and objectives identified in the UN Action Plan on SDP, and it is the second ***main global policy driver supporting the recognition of the value of our industry.***

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14 United Nations. ***Transforming our World: The 2030 Agenda for Sustainable Development***. New York, NY: United Nations; 2015.

15 World Health Organization. ***Global Action Plan on Physical Activity 2018-2030: More Active People for a Healthier World***. Geneva, Switzerland: World Health Organization; 2018

16 Milton K, Bauman A, Faulkner G, et al. Maximising the impact of global and national physical activity guidelines—the critical role of communication strategies. ***Br J Sports Med***. 2020;54(24):1463–1467. doi:10.1136/bjsports-2020-102324

17 Lindsey I, Chapman T. Enhancing the contribution of sport to the Sustainable Development Goals. London: Commonwealth Secretariat; 2017.

18 IOC, International Olympic Committee. Olympic Agenda 2020: 20+20 Recommendations and Sport and Active Society (https://www.olympic.org/news/ olympic-agenda-2020-discussions-culminate-in-20- 20-recommendations).

19 Khan KM, Thompsom AM, Blaire SN, Sallis JF, Powell KE, Bull FC, Bauman AE. Physical activity, exercise and sport: their role in the health of nations. Lancet. 2012;380:59–64

20 Women's Refugee Commission, UNHCR, and GRYC. "We believe in youth": global refugee youth consultations final report (https://www.womensrefugeecommission.org/youth/ resources/1385-gryc-final-report-sept-2016).

21 https://ispah.org/wp-content/uploads/2020/11/English-Eight-Investments-That-Work-FINAL.pdf

22 Milton K, Cavill N, Chalkley A, Foster C, Gomersall S, Hagstromer M, Kelly P, Kolbe-Alexander T, Mair J, McLaughlin M, Nobles J, Reece L, Shilton T, Smith BJ, Schipperijn J. Eight Investments That Work for Physical Activity. J Phys Act Health. 2021 May 14;18(6):625-630. doi: 10.1123/jpah.2021-0112

23 https://en.unesco.org/mineps6/kazan-action-plan

The KAP was elaborated in an inclusive process including all relevant sport policy stakeholders, i.e. over one-hundred experts and practitioners from governments, UN and IGOs, sports organizations, NGOs and academia. It was adopted by over one hundred Member States that attended the Sixth International Conference of Ministers and Senior Officials Responsible for Physical Education and Sport, MINEPS VI, in July 2017.

Eight specific KAP policy areas outline how physical education, physical activity and sport can contribute to distinct SDGs. From those, the following two are specifically connected to our industry potential value:

- II.1. Improve health and well-being of all, at all ages. (….) Evidence shows that participating in physical education, physical activity and sport, including traditional sport and games, is associated with improved psychological and social health, as well as the prevention and treatment of substance abuse (SDG 3.5). Regular participation supports the healthy development of children and adolescents, including their cognitive and psychosocial development. Sport events and large-scale physical activity programmes can also provide a platform for community health messaging and empowerment, engaging a diverse range of people who might otherwise not be reached through conventional health delivery. This supports efforts to address communicable diseases and improve access to health-care services (SDG 3.3 and 3.7).
- II.5 Provide economic growth and full and productive employment and work for all: The contribution of physical education, physical activity and sport to economic growth, increased productivity and employment can be observed in different contexts. The sport industry has been estimated to contribute up to one percent of the global gross domestic product and stimulating its development can contribute to further benefits. Maximizing the potential of sport-related, event-based, and active leisure tourism, in particular, can support these efforts (SDG 8.2). The attractiveness of sport to young people makes it a valuable setting for initiatives aimed at delivering employability outcomes (SDG 4.4), including entrepreneurial training (SDG 8.5 and 8.6). In addition, volunteers make a substantial contribution. The further economic benefit can be derived from deliberate policies aimed at scaling the voluntary contributions of officers, coaches, parents, and other groups who deliver health and social benefit through supporting cost-effective physical activity and sport programmes (SDG 8.3).

The European Policy current context…

In 2013, ministers of health and representatives of the Member States of WHO European Region adopted the *Vienna Declaration on Nutrition and NCDs in the context of Health 2020*. The declaration called for the development of an independent strategy to promote physical activity in the WHO European Region (WHO, 2013)[24]. Since then, WHO Europe and the European Commission have released regional strategies to promote and support policies to tackle physical inactivity and sedentary behaviours. Many members of the WHO European Region have established national physical activity policies in recent years to address the problem of physical inactivity. However, there remain challenges and opportunities to develop and improve the design and implementation of these policies, before the current physical inactivity trends and negative effects are reversed (WHO, 2021)[25].

On the other side, and pursuant to ***Article 165 of the Treaty on the Functioning of the European Union*** (TFEU), the EU should promote European sporting issues and develop the European dimension in sport. This article 165 confers on the EU specific powers to take support, coordination, and development measures in the area of sport. In the context of EU-level cooperation in sport pursuant to this article, there have been increasing demands on the European Commission by policymakers, experts, and sport stakeholders to support the development of a sound

24 WHO (2013), ***Vienna Declaration on Nutrition and Noncommunicable Diseases in the Context of Health 2020***, World Health Organization Regional Office for Europe, https://apps.who.int/iris/handle/10665/350439

25 WHO (2021), ***2021 physical activity factsheets for the European Union Member States in the WHO European Region***, World Health Organization Regional Office for Europe, https://apps.who.int/iris/handle/10665/345335

knowledge base for sport, including reliable information and comparable data. The European Commission has been actively involved in EU-level cooperation in areas of developing viable policy measures to develop sport and the sport-related economy as well as creating a common knowledge base founded on reliable information and accurate data on this topic.

If we look back briefly, the informal EU Working Group "Sport & Economics", chaired by the Commission, was set up in 2006. It developed a harmonised statistical definition of sport (*"Vilnius Definition of sport"*[26]) and a common methodology to measure the economic impact of sport, i.e. Sport Satellite Accounts (SSAs).

In the context of the first *EU Work Plan for Sport 2011-2014*[27], the Council mandated the *Expert Group on Sport Statistics (XG STAT)* to continue working towards developing SSAs. The work on SSAs continued in the *Expert Group on the Economic Dimension (XG ECO)* set up by the second *EU Work Plan for Sport 2014-2017*[28]. Furthermore, in the framework of the EU Work Plan for Sport 2017-2020[29], the Commission organised a cluster meeting on the economic dimension of sport including the practical use of SSAs for sport policy makers, where participants noted the need for the standardised European approach or methodology in assessing the economic impact of sport.

The Commission recognises the importance of SSAs as a tool for sound policy-making and has committed to support the development of national SSAs (2007 White Paper on Sport[30], 2011 Communication on Sport[31]).

In addition, several conclusions of the Council of the European Union and the Representatives of the Governments of the Member States recognised the importance of better and more comparable sport data as well as the need to further promote data collection in the field of sport, thereby inviting the European Commission to:

- Promote the strengthening of the evidence base for sport, in particular by supporting on the basis of previous work in this field, national efforts to develop SSAs and the sharing of best practices at EU level in order to empirically measure the contribution of sport to economic growth and to safeguarding and expanding employment in Europe as well as the identification of key data needs for sport policy-making in Europe, such as participation in sport, and, subsequently, work towards the collection and dissemination of EU-wide sport data in these areas. (2012)[32].
- Continue the collection of statistics and the analysis of the economic and social importance of sport. (2014)[33].
- Promote and support actions such as the exchange of relevant data and method- specific know-how, the collection of evidence and aggregation of sport statistics, as well as technical support, which are aiming to improve and simplify Member States efforts to quantify the economic dimension of sport. (2018)[34].

It is important to acknowledge that **sport is an important economic sector generating growth and employment.** According to a study on measuring the economic impact of COVID-19 on the sport sector in the EU[35] (November

26 https://ec.europa.eu/eurostat/documents/6921402/0/Vilnius_Sport_Definition.xlsx
27 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Aef0029
28 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A42014Y0614%2803%29
29 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A42017Y0615%2801%29
30 http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1389190214279&uri=CELEX:52007DC0391
31 http://bookshop.europa.eu/en/communication-on-sport-2011--pbNC3111173/
32 https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:393:0020:0021:EN:PDF
33 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XG1205(01)&from=EN
34 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XG1205(01)&from=EN
35 https://op.europa.eu/en/publication-detail/-/publication/76b94a58-2f3c-11eb-b27b-01aa75ed71a1/language-en/format-PDF/source-175633451

2020), based on the SSA methodology, in 2020, sport-related GDP accounted for 310,679 million Euros (2.16% of the total EU GDP) and sport-related employment equalled 5.22 million employees (2.67% of the total EU employment).

If we consider the annual EuropeActive/Deloitte Market Research Report (EuropeActive/Deloitte, 2022[36]), the physical activity and fitness sector generated almost 28.800 million Euros in 2019, serving 65,26 million members across EU (and about 17.100 million Euros in 2021, serving 56,29 million members, still recovering while moving back to its prepandemia values). This means that ***our industry is a strong economic player within the European economy, representing around 0,18% of the total EU GDP***. If we consider the particular impact our industry within the European Sports Economy it represents ***about 9,27% of the total sport-related EU GDP***.

For more detailed information about relevant studies focusing on the economic dimension of sport in Europe you can review the following reports:

- Study on the contribution of sport to economic growth and employment in the EU[37];
- Study on national SSAs in the EU[38];
- Study on the economic impact of sport through SSAs[39];
- Study on SSAs in the EU – technical support at national level 2018[40];
- Mapping of sport statistics and data in the EU[41].

In addition, as from 2016, Eurostat is regularly publishing sport statistics[42] that originate from different Eurostat data collections. These statistics concern to the economic aspects of sport and cover the following topics: employment in sport; characteristics and performance of enterprises engaged in the sport sector; international trade in sporting goods; participation in sport events (attendance); practice of sport and physical activity and time spent on sport and outdoor activities; private household expenditure on sporting goods and services; public expenditure for recreational and sport services, price index of sporting goods and services; sport in cities (satisfaction with sport facilities of cities' residents). However, Eurostat regularly faces challenges linked to the definition of sport within the different surveys and classifications; hence, harmonisation and support to its work would be necessary.

36 EuropeActive & Deloitte. ***EuropeActive European Health & Fitness Industry Market Report 2022.*** EuropeActive, Brussels, 2022.
37 Study on the contribution of sport to economic growth and employment in the EU: https://op.europa.eu/en/publication-detail/-/publication/5da6b1f7-bc27-4bd5-9ed0-cba97a08b433
38 Study on national SSAs in the EU: https://op.europa.eu/en/publication-detail/-/publication/ca2a161e-9a91-11e6-9bca-01aa75ed71a1
39 Study on the economic impact of sport through SSAs: https://op.europa.eu/en/publication-detail/-/publication/865ef44c-5ca1-11e8-ab41-01aa75ed71a1/language-en
40 Study on SSAs in the EU – technical support at national level 2018: https://op.europa.eu/en/publication-detail/-/publication/83731533-a315-11eb-9585-01aa75ed71a1/language-en
41 Mapping of sport statistics and data in the EU: https://op.europa.eu/en/publication-detail/-/publication/25c4dfc8-19bf-11ec-b4fe-01aa75ed71a1
42 https://ec.europa.eu/eurostat/web/sport

On ***measuring physical activity levels***, besides data coming from Eurostat mainly through the European Health Interview Survey (EHIS), the following two sources are available. First, the Commission regularly issued a Eurobarometer on sport and physical activity (last one published in 2022[43], previously 2003, 2010, 2014 and 2018) to support the developing policy framework for promoting sport and physical activity. Second, the Council Recommendation on promoting health-enhancing physical activity (HEPA) across sectors[44], adopted in November 2013, includes in its Annex a set of 23 indicators that are used to monitor the progress made in the Member States on policies to promote HEPA and to evaluate physical activity levels.

The EU Commission worked closely with the WHO to compile the EU Member States' contributions to country factsheets on physical activity[45], which were last published in September 2021.

The basis for harmonising physical activity questionnaires is already laid. However, the implementation details may necessarily change according to the population surveyed, so there is an increasing demand to further harmonise physical activity questionnaires in the EU. At the same time, there is a solid demand from policy-makers to integrate accessible wearable technologies to monitor active behaviours at population level in the next few years.

Recent study results (EU Commission, 2020[46]) have shown that in the EU-27 the impact of COVID-19 across the sport sector in 2020 under the most likely scenario at present is estimated at 47,430 million Euros GDP (-15.3%) and 844,773 employees in persons (-16.2%). Apart from the sectorial and employment losses, the decrease in sport participation and physical activity due to the COVID-19 pandemic possibly had serious health impacts that are currently intangible but there could soon backlash (EU Commission, 2020).

A controversial but very relevant topic for policy-makers and stakeholders is the ***monetization of the intangible benefits of sport and physical activity.*** While the positive impact of physical activity on health is undeniable, the difficulty of quantifying the benefits for the individual and for the society means that the full importance of sport and physical activity are often underestimated. Apart from the direct (physical and mental) and indirect health benefits (for example through socialization), sport and physical activity may also have positive effects on the environment (for example, cycling instead of using the car) and more generally they increase the EU social capital[47]. Efforts to quantify the societal benefits of physical activity, as well as the costs of physical inactivity, currently suffer from a wide range of different assumptions and methodologies. However, at least some of the benefits can and should be taken into account (Ding et al., 2017[48]).

As a result of this context, the EU Commission decided to launch a ***Task Force (TF SPORT) to harmonise sport statistics and to strengthen the evidence base for sport***. It is important to note that ***Prof. Alfonso Jimenez, Head of THiNK Active***, was recruited as expert, and selected as Co-Chair of the Task Force SPORT last July 2022[49]. The results from the work of this group would also feed into the policy process, including the follow-up work of the Expert Group on Economic Dimension and the Expert Group on Sport Statistics in the context of the European

43 https://europa.eu/eurobarometer/surveys/detail/2668

44 https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=celex%3A32013H1204%2801%29

45 https://www.euro.who.int/en/health-topics/disease-prevention/physical-activity/data-and-statistics/physical-activity-fact-sheets/2021-physical-activity-factsheets-for-the-european-union-member-states-in-the-who-european-region

46 European Commission, Directorate-General for Education, Youth, Sport and Culture, ***Mapping study on measuring the economic impact of COVID-19 on the sport sector in the EU: final report***, Publications Office, 2020, https://data.europa.eu/doi/10.2766/76024

47 Adler, Paul S., and Seok-Woo Kwon. 2002. "Social Capital: Prospects for a New Concept." Academy of Management Review 27(1)1:17–40. JSTOR 4134367, see also Eurobarometer: Special Eurobarometer 223: Social Capital https://data.europa.eu/data/datasets/s443_62_2_ebs223?locale=en

48 Ding, D., Kolbe-Alexander, T., Nguyen, B., Katzmarzyk, P. T., Pratt, M., & Lawson, K. D. (2017). The economic burden of physical inactivity: a systematic review and critical appraisal. British journal of sports medicine, 51(19), 1392-1409.

49 Prof. Alfonso Jimenez serves as Co-Chair ***Task Force (TF SPORT) on the harmonisation and development of sport statistics, including statistics and data on health-enhancing physical activity, social dimension of sport and Sport Satellite Accounts in the EU***. GOPA Luxemburg, EU Commission DGEAC, Sport Unit and Eurostat.
https://sport.ec.europa.eu/news/call-for-experts-for-a-task-force-on-harmonised-sport-statistics-in-the-eu-tf-sport

Council's work as well as the implementation of the EU Work Plan for Sport 2021-2024[50].

Finally, we would like to refer specifically to a key strategic report just launched last month, in a special event at Copenhagen with participation from Andreas Paulsen, EuropeActive CEO. The report is called ***Step up! Tackling the Burden of Insufficient Physical Activity in Europe,*** jointly produced by the OECD and WHO/Europe (2023)[51].

Again, the report highlights that despite the wide range of health benefits, ***one in three European adults does not meet recommended physical activity levels***. According to OECD and WHO/Europe analysis, ***this will result in 11.5 million new cases of non-communicable diseases by 2050, costing European Union Member States on average 0.6% of their health care budget every year. While this may seem a small amount, it is equivalent to the total health care expenditure of Lithuania and Luxembourg combined. Though policy makers have made significant efforts across the European Union to increase population-level physical activity, more can and needs to be done to step up action on physical activity.***

Step up! Tackling the Burden of Insufficient Physical Activity in Europe (2023), ***makes the economic case for investing more in physical activity policy***. It shows the potential impact that increasing physical activity levels would have on population health and the economy: increasing the life expectancy of people who are insufficiently active by 7.5 months, preventing more than 10,000 premature deaths per year, and saving European Union Member States a total of EUR PPP 8 billion per year.

The report also provides policy options to increase physical activity, drawing on case studies from across the European Union. It highlights the wide range of policy options available, from setting- or target-group specific policies like interventions in schools, workplaces or the health care setting, to policies to increase access to sports facilities or encourage active transport and outdoor activities.

Investing in physical activity policies improves individual well-being and population health, while also returning EUR 1.7 in economic benefits for every EUR 1 invested. In fact, the impact of insufficient physical activity on health care expenditure presented in this report is comparable to previous estimates, albeit at the lower end of the range.

Although we will discuss it extensively later in this document, ***it has to be noted that the benefits of increased physical activity reach far beyond population health and health care expenditure***. A healthier population translates into a larger, more productive workforce. As a result, the health and economic impact of the current and potential future pandemics may be lessened. Finally, there are beneficial links between physical activity policies and other important policy areas such as the environment. Altogether, there is a strong case to invest in policies that increase physical activity levels in the population (OECD-WHO EU Report, 2023).

A wide range of policy options exist to increase population physical activity, including regulatory, economic and information policies. Some are setting- or target-group specific – for example interventions in schools, workplaces or in the health care setting. Other policies aim to increase access to sports facilities or change the environment to encourage active transport and outdoor activities. Communication policies can be used to encourage physical activity and inform people about what to do, when and where. Almost all EU Member States monitor physical activity levels in adults and children, and have physical education in schools. Moreover, since 2015, there has been a strong increase in the number of countries that have policies to improve access to physical activity for socially disadvantaged groups and older adults, and schemes for physical activity promotion in schools and the workplace.

However, ***there is still considerable scope to expand the policy response across the Europe***. In particular, few countries have implemented programmes to involve sports clubs, fitness clubs and leisure centres in health

50 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:42020Y1204(01)

51 OECD and WHO/Europe. ***Step up! Tackling the Burden of Insufficient Physical Activity in Europe***, Feb. 2023. https://www.oecd-ilibrary.org/sites/500a9601-en/index.html?itemId=/content/publication/500a9601-en

promotion, or systematically apply the European guidelines in planning leisure-time infrastructure (IMPALA[52]). Schemes to promote active travel to school or work are only present in 14 and 17 out of 27 EU Member States, respectively. Moreover, while in 2015 all countries reported having a HEPA policy or action plan that specifically targets high needs groups (e.g. young children, older adults people in low socio-economic groups, people with a disability), in 2021 only 20 out of 27 countries had such policies (OECD/WHO Europe, 2023).

Key message:

Sports facilities can play a major role in enabling and encouraging physical activity in the population. Increasing public spending on recreational and sports services can increase the physical activity level for the population. OECD modelling estimates that, for Italy, an additional 1% investment could avoid more than 800 cases of cardiovascular disease annually, and it would be highly cost-effective (less than EUR 30,000 per DALY) as early as five years after the beginning of the intervention (Goryakin et al., 2019[53]).

Availability of and access to sports facilities is an important driver of physical activity: 82% of people who exercise or play sports regularly say that they have many opportunities to do so in their local area, compared to 66% of people who never exercise (European Commission, 2018[54]). Opportunity is linked to socio-economic factors, as 79% of people who pay their bills without difficulty agree that they have sufficient opportunities in their area, but this falls to 59% among people who have difficulties paying bills most of the time. ***To ensure equitable access to sports facilities, such as sport pitches or gyms, they need to be available in the community, for people of all ages and abilities, at an accessible price.***

(OECD/WHO Europe, 2023)

52 Europe: ***IMPALA Guidelines, 2011:*** The ***Improving Infrastructures for Leisure-time Physical Activity in the Local Arena*** (IMPALA) guidelines were developed through a collaboration of scientists and policy makers from 12 EU Member States, with funding from the European Commission. They consider three types of infrastructure: sports facilities, leisure time infrastructure (e.g. playgrounds, bike paths) and urban "green" and "blue" spaces (e.g. forests, beaches).
The guidelines identify ways in which infrastructure for leisure-time physical activity can be assessed and improved with a focus on social equity, inter-sectoral collaboration and participation. They are set across five key areas: policy making, planning, building, financing, and management. For example, for planning the guidelines provide advice on how to plan specific actions together with all relevant groups and stakeholders. Under financing, an overview is provided with the impact of different investor models, subsidies and funding procedures on equity issues as well as on collaboration between different policy sectors and levels.

53 Goryakin, Y. et al. (2019), "Promoting sport and physical activity in Italy: a cost-effectiveness analysis of seven innovative public health policies", Ann Ig, Vol. 31, pp. 614-625, https://doi.org/10.7416/ai.2019.2321

54 European Commission (2018), Special Eurobarometer 472: Sport and physical activity, https://europa.eu/eurobarometer/surveys/detail/2164

A great example of Best Practice: GO fit clubs promoting physical activity in Spain

In 2021 our research group at GO fit LAB[55] published a truly interesting paper (López-Fernandez et al., 2021[56]) comparing GO fit members active behaviour with the physical activity levels of the Spanish population based on Eurobarometer data (EU Commission 2018[57]). This study concluded that "m***embers of leisure centres are mostly active as only 15.5% of members of the members of the Spanish GO fit leisure centres reported to be low-PA, while 47.0% reported to be high-PA. Moreover, the members of leisure centres showed lower prevalence of PIA and a higher prevalence of high-PA than the Spanish population regardless gender and age. As a consequence, GO fit members showed higher MET-min/week than the general population. Differences in PA levels between men and women were confirmed either in leisure centres members or the general population. However, both men and women of GO fit leisure centres showed higher MET-min/week than the general population. Vigorous PA represented a higher proportion of total MET-min/week in leisure centres' members than in the general population regardless of the PA group (low-PA; moderate-PA; high-PA). Moreover, more than 70% of METs in the low-PA and moderate-PA of the Spanish population were due to walking"*** (see figure #2 below).

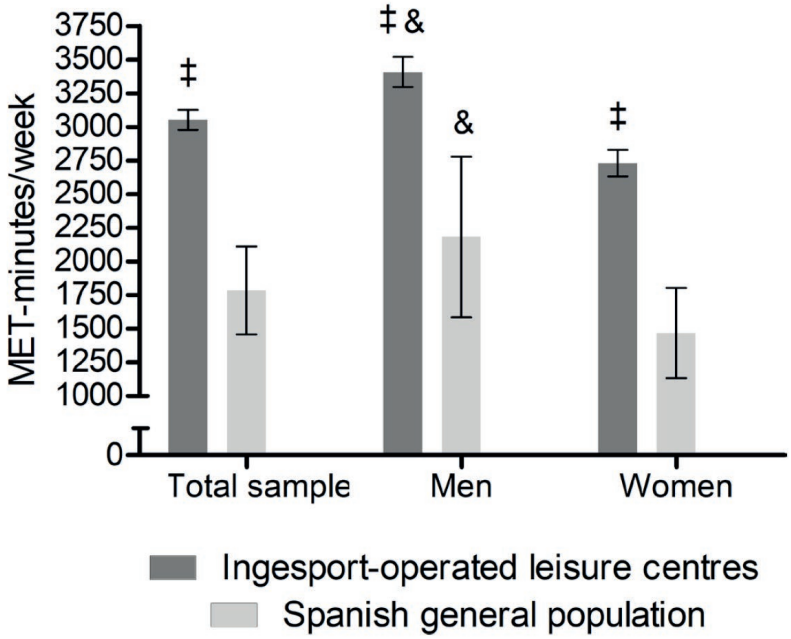

Figure #2: Average total MET-min/week between the leisure centre and the Eurobarometer for all participants and for men and women separately (Lopez-Fernandez et al., 2021)

‡: Significantly higher MET-min/Week (p<0.05) in the leisure centres regarding the Eurobarometer; &: Significantly higher MET-min/week (p<0.05) in men regarding the women; MET: metabolic equivalent.

55 https://go-fit.es/go-fit-lab/

56 López Fernández J, López-Valenciano A, Mayo X, et al. Comparative analysis of reported physical activity from leisure centres' members versus the general population in Spain. BMJ Open 2021;11:e043963. doi:10.1136/bmjopen-2020-043963

57 https://europa.eu/eurobarometer/surveys/detail/2164

This ability of leisure centres to engage people from all ages, but specially women and older adults, enforce the suggestion that European countries should develop specific strategies to engage leisure centres in the overall mitigation of population-based physical inactivity (PIA) (Beedie, Mann, Jimenez, 2014[58]; López-Fernández, Jimenez, 2018[59]). These centres can also be used for targeting diseases related to PIA (Watts, Webb, Netuveli, 2017[60]; Beedie, Mann, Domone, 2016[61]).

However, some authors (Cañamero et al., 2019[62]; Clavel-San Emeterio et al., 2019[63]) acknowledge that many leisure centre members do not regularly exercise within the centres, and that many members leave the centres within the first 6 months (Sperandei at al., 2019[64]; Sperandei et al., 2016[65]). Moreover, a significant proportion of new members report being inactive before enrolling (Sperandei et al., 2016) while the cost of the membership fee might be a barrier for some people (Moreno-Llamas et al., 2020[66]).

Key message:

"We encourage policymakers and the fitness industry to work together in order to increase the accessibility to these centres to low-income people and to develop effective formulas to reduce the gender and age gaps that exist in PA habits. Providing physical activity opportunities according to the gender and age preferences, eliminating socio-spatial gendering barriers and applying behaviour change strategies in these centres might work to improve the effectiveness of leisure centres as physical activity providers and improve access to these places to disadvantaged groups".

(López-Fernández et al., 2021)

Returning to our main discussion topic in this chapter, the global policy context in which our industry operates… As expected, it seems that a comprehensive, well-funded package of policies is needed to get people moving (OECD/ WHO Europe, 2023). Research shows that while all policies have their own benefits, it is unlikely that any single policy will have a major impact on physical activity levels in the population. Physical activity is a complex behaviour, which is influenced by many different factors, including personal variables such as motivation and physical ability;

58 Beedie C, Mann S, Jimenez A. Community fitness center-based physical activity interventions: a brief review. Curr Sports Med Rep 2014;13:267–74.
59 Lopez-Fernandez J, Jiménez A. It is time for the fitness & wellness industry to lead the agenda against physical inactivity. Res Invest Sports Med 2018;2:1–3.
60 Watts P, Webb E, Netuveli G. The role of sports clubs in helping older people to stay active and prevent frailty: a longitudinal mediation analysis. Int J Behav Nutr Phys Act 2017;14:95.
61 Beedie C, Mann S, Domone S. Effects on cardiovascular risk factors of three 48-week community-based exercise interventions. Med Sci Sports Exerc 2016;48.
62 Cañamero SR, García-Unanue J, Luis Felipe J, Sánchez-Sánchez J, Gallardo L (2019) Why do clients enrol and continue at sports centres? Sport, Business and Management: An International Journal. Epub ahead of print 14 April 2019. DOI: 10.1108/SBM-10-2018-0077
63 Clavel San Emeterio I, García-Unanue J, Iglesias-Soler E, Luis Felipe J, Gallardo L (2019) Prediction of abandonment in Spanish fitness centres. European Journal of Sport Science 19(2): 217-224.
64 Sperandei S, Carvalho Vieira M, Reis AC. Adherence to physical activity in an unsupervised setting: the case of lapse and return to practice in a Brazilian fitness center. AJSPO 2019;6:95–108.
65 Sperandei S, Vieira MC, Reis AC. Adherence to physical activity in an unsupervised setting: explanatory variables for high attrition rates among fitness center members. J Sci Med Sport 2016;19:916–20.
66 Moreno-Llamas A, García-Mayor J, De la Cruz-Sánchez E. Physical activity barriers according to social stratification in Europe. Int J Public Health 2020;65:1477–84.

environmental factors such as schools, worksites, and other places where people spend most of their time; community characteristics determining the opportunity to exercise, as well as social factors such as peer pressure and public information (Bauman et al., 2012[67]). To increase physical activity, a comprehensive package of policies is needed to target all of these factors at the same time.

Previous OECD modelling work has shown that a "physical activity policy package" (including interventions for prescribing physical activity, investing in active transport and school-based programmes) can lead to significant health gains and savings in health care expenditure. Such a package of policies aimed at increasing physical activity, implemented in 36 countries, would prevent about 38,000 NCDs per year and save around EUR 14 billion in health cost by 2050 – equivalent to the total annual health care expenditure of Greece. Moreover, ***for every EUR 1 invested in a physical activity policy package, EUR 1.7 are returned in economic benefits*** (OECD, 2019[68]).

According to another relevant policy report from WHO (2021), as with any public health strategy, ***it is crucial to ensure that the policy package has both financial and political support***. *Current funding for physical activity is often insufficient, short term, narrow in scope, and focused on pilot and demonstration projects instead of strengthening a supportive system. Policy makers should set up sustainable and long-term funding* (WHO, 2021[69]).

Moreover, while multicomponent, multilevel strategies are notoriously difficult to study, *a comprehensive evaluation should be conducted to help understand whether the strategy works, what other impact it has, its value relative to the resources required to deliver it, how it interacts with the context in which it is implemented, and how it contributes to system change* (Skivington et al., 2021[70]). ***An efficient data management and data linkage system to collect timely and accurate data can support evaluation studies***[71].

The task at hand is clear: ***make physical activity a public health priority to improve health and reduce the burden of non-communicable diseases*** (OECD/WHO Europe, 2023).

However, to achieve such a goal, much work remains. As identified by Pratt and colleagues (2015): *"Rather than falling under strategies for other risk factors, physical inactivity should be a separate and equal concern, and should be recognised as a unique specialty. A strong policy framework, consistent investment in physical activity programmes and infrastructure, multi-sectoral support, high population reach, and good surveillance should characterise each future action" (Pratt et al., 2015[72]).*

Adaptation of the evidence-based strategies to community need, culture, and context is critical. An isolated public health strategy for physical activity is unlikely to be successful as many of the necessary actions occur in sectors other than public health and because sustained funding is nearly impossible without the broader political support associated with strong partners (OECD/WHO Europe, 2023).

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67 Bauman, A. et al. (2012), "Correlates of physical activity: why are some people physically active and others not?", ***The Lancet***, Vol. 380/9838, pp. 258-271, https://doi.org/10.1016/s0140-6736(12)60735-1

68 OECD (2019), ***The Heavy Burden of Obesity: The Economics of Prevention***, OECD Health Policy Studies, OECD Publishing, Paris, https://doi.org/10.1787/67450d67-en

69 WHO (2021), ***Fair Play: Building a strong physical activity system for more active people***, World Health Organization, https://apps.who.int/iris/handle/10665/346169

70 Skivington, K. et al. (2021), "A new framework for developing and evaluating complex interventions: update of Medical Research Council guidance", ***BMJ***, Vol. 374, p. n2061, https://doi.org/10.1136/BMJ.N2061

71 EuropeActive ***European DataHub Project*** (EDH), developed in partnership with 4Global, is aiming to solve this challenge connected to policy impact and implementation assessment promoting Active Living. Check the dedicated chapter within this report to better understand how it will work, its scope, solutions and value.

72 Pratt, M. et al. (2015), "Can Population Levels of Physical Activity Be Increased? Global Evidence and Experience", ***Progress in Cardiovascular Diseases***, Vol. 57/4, pp. 356-367, https://doi.org/10.1016/j.pcad.2014.09.002

…What we are calling here is for policy-makers across Europe (and the world), to recognize the high-impact value, opportunity and commitment from our proactive and responsible industry to become an effective partner of any policy strategy and/or action supporting Active Living…

(Jimenez, Mayo, Copeland, 2020[73])

73 Jimenez, A., Mayo, X., Copeland, R.J. *The Economic and Social Impact of promoting active living after the COVID-19 crisis. The role, value and impact of a proactive and responsible health and fitness industry"*. EuropeActive, Brussels, June 2020. DOI: 10.13140/RG.2.2.33005.61927

#3. The real value for society of an industry supporting Active Living: a comprehensive review

A solid evidence review published in 2015 under the Culture and Sport Evidence (CASE) Programme (Taylor, Davies et al., 2015[74]) addressed some key defining features of the value of sport, physical activity and exercise practice for society. Accordingly to the authors, "*the highest quality evidence concerns health benefits, which prevent or reduce physical and mental health problems and save on health care costs. There is stronger evidence for the benefits of sport for physical health than for mental health. Positive health benefits are population-wide but particularly important for older people. Substantial evidence supports the role that sports participation plays in reducing crime and anti-social behaviour, particularly for young men. The weight of evidence reviewed suggests a beneficial effect from sports participation on, for example, lower levels of recidivism, drunk driving, use of illegal drugs, crime and suspensions at school, property crime, shoplifting and juvenile crime. There is also considerable evidence of the positive effect of sport and exercise on educational outcomes, including psychological benefits and cognitive benefits. Furthermore, sport and exercise have been shown to have positive effects on a number of final outcomes, including educational attainment*" (Taylor, Davies et al., 2015).

At the same time, Taylor and colleagues identified that wellbeing is the manifestation of the catalytic role that sport, physical activity and/or exercise play in stimulating social impacts. "***Without a sense of wellbeing from participating, people would not sign up to sport/exercise; and without a sense of wellbeing from participating, people would not play/practice as frequently as they do***" (Taylor, Davies et al., 2015).

3.1. Healthcare cost reduction impact from physical activity and sports

According to the latest figures published by *Eurostat,* EU member states dedicate the **97%** of their healthcare budget to **cure**, while they on average spend **2,8 %** on **preventive care**, which translates into an expenditure of **82 EUR per inhabitant** on average (Eurostat, 2023[75]). With 4,4 % of its healthcare budget spend on preventive care, ***Italy*** spends the most of any EU member state and with 0,8 %, Slovakia spends the least.

The Covid19 epidemic has exposed all the latent weaknesses in healthcare systems and highlighted the need to shift from a "**sick care**" model, based on reactive diagnosis and treatment of diseases, to a "**health care**" model, which takes care of health by emphasizing the centrality of prevention and healthy lifestyles. There is an urgent need for systematic changes that can accelerate this transition.

It is estimated that **70% to 80% of health budgets** in the European Union are being spent on treating chronic diseases, which represents around **€700 billion** being invested on mostly preventable, lifestyle-related diseases. At least 80% of all heart disease, stroke, and diabetes, and around 40% of cancers could be prevented by applying the right prevention procedures.
One of the key risk factors for developing these chronic lifestyle-related diseases is a ***lack of physical activity.*** Therefore, it is crucial that physical activity promotion campaigns are considered a key tool for health promotion

74 Taylor, P., Davies, L., Wells, P., Gilbertson, J., Tayleur, W. ***A review of the Social Impacts of Culture and Sport.*** The Culture and Sport Evidence (CASE) Programme. Department for Culture, Media, and Sport (DCMS) in collaboration with the Arts Council England (ACE), English Heritage (EH) and Sport England (SE). London, 2015.

75 Eurostat (2023) EU Healthcare expenditure statistics: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Healthcare_expenditure_statistics#Healthcare_expenditure

and disease prevention and that they receive appropriate and sustained public funding (WHO, 2021; Wellness Foundation, 2023).

But if we look at the **burden of disease** there is a fundamental need for economic evaluation of interventions to address physical inactivity (Ding et al., 2017)[76]

Estimating the economic burden is a vital first step in understanding the overall burden of physical inactivity and the consequences of inaction, which helps galvanise policy efforts. However, burden of disease studies should not be the sole consideration in the prioritisation process. For instance, large problems may be addressed relatively inexpensively and vice versa. Therefore, ***it is vital that economic evaluation is undertaken to assess both the costs and benefits of interventions to reduce the economic burden and to identify interventions that are the greatest value for money***. In this way, resource-constrained decision makers can best prioritise societal resources to increase population health. There are guidelines that should be followed when conducting and reporting economic evaluations (Husereau et al., 2013)[77].

Overall, estimating the economic burden of physical inactivity is an area of increasing research and policy importance. Ding and colleagues (2017) recommended that ***future cross-disciplinary collaborations involve economists to ensure that best practice is adopted, and physical activity experts to ensure that analyses are valid***. Specifically, they recommended that a societal perspective is adopted to include direct, indirect, and household costs, with the overall estimate reported and then disaggregated to these three levels.

Furthermore, according to the authors: "*it is vital to carefully consider potential confounding, reverse causality, and comorbidity. Discounting (when future impacts are included) and sensitivity analysis should be undertaken routinely. Overall, it is vital that studies are transparent in reporting the objectives, rationale and intended end-users/decision makers and that they align with assumptions made with the objectives. Finally, studies should transparently report any funding sources and conflict of interest*".

Unfortunately, there are currently no guidelines specifically for studies that estimate the economic burden of risk factors, but Ding et al (2017) developed a ***checklist for reporting estimates of the economic costs/burden of risk factors*** (see table #1 below), adapted from the Consolidated Health Economic Evaluation Reporting Standards (Husereau et al., 2013)[78].

76 Ding D, Kolbe-Alexander T, Nguyen B, et al., ***The economic burden of physical inactivity: A systematic review and critical appraisal***, Br J Sports Med 2017;51:1392–1409. https://doi.org/10.1136/bjsports-2016-097385

77 Husereau D, Drummond M, Petrou S, et al. Consolidated health economic evaluation reporting standards (CHEERS) statement. Value Health 2013;16:e1–e5.

78 Husereau D, Drummond M, Petrou S, et al. Consolidated health economic evaluation reporting standards (CHEERS) statement. ***Value Health*** 2013;16:e1–e5.

Table 5 Checklist for reporting estimates of the economic costs/burden of risk factors*

Section/item	Item no.	Recommendation
Title and abstract		
Title	1	Identify the study as an estimate of the economic burden of a risk factor (ie, physical activity) and identify the study sample
Abstract	2	Provide a summary of objectives, perspective, setting, methods (including study design and inputs), results, including statistical uncertainty, and sensitivity analysis (changes in key structural assumptions) and conclusions
Introduction		
Background and objectives	3	Provide an explicit statement of the study objective(s) and broader context for the study. Present the study question and its relevance for health policy or practice decisions. Describe whether previous estimates existed for the same risk factor among the same (or comparable) populations
Methods		
Target population and subgroups	4	Describe characteristics of the study sample/population. If subsamples/populations are chosen, provide justification of why and how they are chosen
Setting and location	5	State relevant aspects of the system(s) in which the decision(s) need(s) to be made. Define decision maker(s) that the study is intended to inform
Study perspective	6	Describe the perspective of the study, ensure this is consistent with the study objective(s) and aligned with the categories of costs/burden being evaluated
The risk factor(s)	7	Define the risk factor(s) (eg, physical inactivity), how the risk factor is measured (eg, questionnaire), the reliability and validity of the measurement instrument, the minimal risk counterfactual and the rationale for selecting the counterfactual or categories (eg, meeting physical activity recommendations)
Choice of health outcomes	8	Define the health outcomes associated with the risk factor(s), the rationale for selecting the outcomes (eg, evidence on the risk factor–outcome associations), describe whether comorbidity is taken into account
Costs/burden estimated	9	Define the costs/burden estimated (eg, healthcare expenditure, productivity losses) and the estimates included (eg, inpatient and outpatient care)
Data sources	10	Describe the sources of data, the years the data cover and any major caveats/limitations related to the data, if any
Time frame	11	State the time frame over which costs/burden are considered (eg, single year, patient lifetime) and explain why it is appropriate
Discount rate(s)	12	Report the choice of the discount rate(s) used for costs/burden and explain why this choice is appropriate
Year of reporting and common unit of measure for costs/ burden	13	Report the year that the estimates refer to and the common unit of measure used to collate costs/ burden (eg, for costs state the currency, and for burden state the health measure, such as disability adjusted life years. If relevant, describe methods for converting costs into a common currency and year of reporting (eg, inflation rates, purchasing power parity conversion factors)
Analytic methods and assumptions made	14 14a 14b	Describe the overall analytical approach (eg, population attributable fraction (PAF) approach and econometric approach). Describe all assumptions, such as rationale for choice of model, statistical distribution and any other major assumptions (eg, missing data imputation) For study using a PAF approach, report where the PAF was derived, whether PAF was based on adjusted or crude relative risk For study using an econometric approach, report the study design (eg, prospective, cross-sectional), statistical models and covariates adjusted
Results		
Costs/burden estimates	15	Report the values (eg, mean) and associated statistical distributions/ranges for all parameters. If secondary data is used, reference appropriately. A bespoke table transparently reporting all input values (from methods) and outputs (from results) is strongly recommended
Characterising uncertainty	16	If applicable, describe the effects of sampling uncertainty (statistical sensitivity analysis) on results and structural uncertainty in changing methodological assumptions (eg, study perspective, model choice and discount rates)
Characterising heterogeneity	17	If applicable, report differences in costs and/or other outcomes that can be explained by variations between subgroups with different baseline characteristics or other observed variability in effects that are not reducible by more information
Other		
Source of funding	18	Describe how the study was funded and the role of the funder in the identification, design, conduct and reporting of the analysis Describe other non-monetary sources of support
Conflict(s) of interest	19	Describe any potential for conflict of interest among study contributors in accordance with journal policy. In the absence of a journal policy, we recommend authors to comply with International Committee of Medical Journal Editors' recommendations

*Checklist adapted from the Consolidated Health Economic Evaluation Reporting Standards (CHEERS).

Table #1: Checklist for reporting estimates of the economic costs/burden of risk factors (Ding et al., 2017)

It is important to highlight, as acknowledged by the authors, that "it is impossible to completely standardise methodologies because economic analysis is often conducted to address the needs of specific stakeholders" (Ding et al, 2017). Hence, their proposed checklist should be used as a guide for improving methodological rigor and reporting quality for future economic analysis, appropriately addressing specific objectives.

Key message:

"Assessing the economic burden of physical inactivity is important; however, there is a need for general improvement in the ***conduct, reporting and interpretation of studies to increase the credibility of findings and to promote their use by decision makers****".*

(Ding et al., 2017).

In a recent key study called "*The cost of inaction on physical inactivity to public health-care systems: a population-attributable fraction analysis*" (Santos et al., 2022[79]) the authors used a population-attributable fraction formula to estimate the direct public health-care costs of NCDs and mental health conditions for 11 years (from 2020 to 2030). The disease outcomes included were incident cases of coronary heart disease, stroke, type 2 diabetes, hypertension, cancer (breast, colon, bladder, endometrial, oesophageal, gastric, and renal), dementia, and depression in adults aged at least 18 years. They used the most recent health and economic data evidence available for 194 countries.

At the study abstract the authors reinforced a strategic message: "***Making the investment case for physical activity is key to informing decision making and prioritising resources and generating political and societal support for policy implementation. Estimating the health and economic costs of continuing with no action to reduce levels of physical inactivity is the first step in building a case for investment in physical activity***" (Santos et al., 2022)

In fact, reducing the prevalence of modifiable risk factors, such as tobacco use, harmful use of alcohol, unhealthy diets, and physical inactivity, is a cost-effective strategy to reduce the burden of non-communicable diseases (NCDs) and mental health problems. So, for every US$1 invested in scaling up effective interventions to reduce risk factors and manage NCDs, for example, could generate a return of up to US$7 in low-income and middle-income countries (LMICs), where almost 85% of all premature deaths due to NCDs occur every year (WHO, 2021[80]).

Solid published evidence has confirmed that physical inactivity increases the risk of death from noncommunicable diseases (NCDs). But only one previous global study (Ding et al., 2016[81]) has estimated the direct health-care costs resulting from physical inactivity using a disease prevalence-based approach, reporting an economic cost to society of INT$53·8 billion (2013 prices), of which 58% was paid by the public sector. That study included five health outcomes for which estimates of the relative risks were available at the time. However, the study did not address the important questions of what would be the current and future potential preventable public health-care costs that could be averted if levels of physical inactivity were to be reduced or eliminated.

79 Santos, A.C., Willumsen, J., Meheus, F., Ilbawi, A., Bull, F.C. The cost of inaction on physical inactivity to public health-care systems: a population-attributable fraction analysis. ***Lancet Glob Health*** 2023; 11: e32–39 Published Online December 5, 2022 https://doi.org/10.1016/S2214-109X(22)00464-8

80 WHO. Saving lives, spending less: the case for investing in noncommunicable diseases. Geneva: World Health Organization, 2021. https://apps.who.int/iris/handle/10665/350449

81 Ding D, Lawson KD, Kolbe-Alexander TL et al. The economic burden of physical inactivity: a global analysis of major non-communicable diseases. ***Lancet.*** 2016; 388: 1311-1324.

Their main results are summarised as follows: "*499·2 million new cases of preventable major NCDs would occur globally by 2030 if the prevalence of physical inactivity does not change, with direct health-care costs of INT$520 billion. The global cost of inaction on physical inactivity would reach approximately $47·6 billion per year. Although 74% of new cases of NCDs would occur in low-income and middle-countries, high-income countries would bear a larger proportion (63%) of the economic costs. The cost of treatment and management of NCDs varied—although dementia accounted for only 3% of new preventable NCDs, the disease corresponded to 22% of all costs; type 2 diabetes accounted for 2% of new preventable cases but 9% of all costs; and cancers accounted for 1% of new preventable cases but 15% of all costs*" (Santos et al., 2022).

At the discussion section, the authors recognized that a particular concern is the high burden of physical inactivity seen in preventable cases of dementia and cancers because, despite the relatively lower incidence of these conditions compared with other NCDs, these diseases incur a high cost because of requirements of diagnosis, treatment, and long-term management. Furthermore, ***although most predicted new cases of NCDs would occur in LMICs, high-income countries will bear a larger proportion of the economic burden***. This finding reflects the increased coverage and cost of health care in wealthy countries compared with lower-income settings. Their findings also highlight the high number of cases of depression and anxiety, rates of which steadily increased during the COVID-19 pandemic (Santomauro et al, 2020[82]; WHO, 2020[83]). Furthermore, incidence and prevalence of those mental health disorders can also be effectively reduced by increasing physical activity levels, which would also help to reduce costs to health-care systems and increase wellbeing (WHO, 2019[84]).

Finally, and regarding attributing direct medical costs to physical inactivity, Santos and colleagues (2022) adopted the perspective of the public health sector and excluded private sector and household costs, as well as societal costs with productivity losses and death, because of methodological challenges in assessing these costs (Brouwer, Koopmanschap, 2005[85]).

At the recent OECD/WHO Europe report (2023[86]), that we discussed extensively in the previous chapter of our document, this impact from insufficient physical activity and related non-communicable diseases increasing the burden on health systems has been addressed as well. In this case, the ***Strategic Public Health Planning for Non-Communicable Diseases (SPHeP-NCDs) model***[87] is used to calculate the impact of insufficient physical activity on non-communicable diseases and their health care expenditure for the 27 EU Member States (EU27).

The OECD has developed the SPHeP-NCDs model to quantify the impact of major risk factors on population health and the economy. To calculate the burden of insufficient physical activity, the OECD SPHeP-NCDs model is run for two scenarios. The "baseline" scenario is based on current levels of insufficient physical activity. The "no insufficient physical activity" scenario reflects a hypothetical state in which everyone achieves a sufficient level of physical activity. By comparing the outputs of these two scenarios, the burden of current insufficient physical activity levels can be calculated. Note that this analysis aims to capture the total existing burden of insufficient physical activity, rather than the potential impact of reductions in physical inactivity (e.g. the target in the WHO's Global Action Plan on Physical Activity 2018-30 to reduce physical inactivity by 10% by 2025, and 15% by 2030 (WHO, 2018).

82 Santomauro DF, Mantilla Herrera AM, Shadid J et al.Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. ***Lancet.*** 2021; 398: 1700-1712

83 WHO. The impact of the COVID-19 pandemic on noncommunicable disease resources and services: results of a rapid assessment. Geneva: World Health Organization, 2020. https://www.who.int/publications/i/item/9789240010291

84 WHO. Global Action Plan on Physical Activity 2018–30: more active people for a healthier world. 2019. https://apps.who.int/iris/handle/10665/272722

85 Brouwer WBF, Koopmanschap MA. The friction-cost method: replacement for nothing and leisure for free? ***PharmacoEconomics,*** 2005; 23: 105-111

86 OECD and WHO/Europe. ***Step up! Tackling the Burden of Insufficient Physical Activity in Europe***, Feb. 2023. https://www.oecd-ilibrary.org/sites/500a9601-en/index.html?itemId=/content/publication/500a9601-en

87 ***Since the OECD SPHeP-NCDs model takes into account diseases and health care cost not related to insufficient physical activity (e.g. if people live longer due to increased physical activity levels, they would develop other conditions), the impact estimated by the OECD model is expected to be lower than when using a PAF approach.***

To model a "*no insufficient physical activity*" *scenario*, a cut-off value for insufficient physical activity first needs to be defined. This is based on the recently published WHO guidelines for physical activity (WHO, 2020). For adults, the general recommendation is to engage in at least 150-300 minutes of moderate-intensity aerobic physical activity; or at least 75-150 minutes of vigorous-intensity aerobic physical activity per week, or a combination.

To be able to compare different types of physical activity, the OECD SPHeP-NCDs model measures physical activity as MET-minutes per week, using an average value of 4 METs for moderate-intensity physical activity and 8 METs for vigorous physical activity following WHO guidelines (2020).

Although you could access the full report content and analysis as an open source following the link included in its reference (OECD/WHO Europe, 2023[88]), we are including below the most critical results from this comprehensive analysis regarding the burden of physical inactivity for the European society due to its value to contextualize the potential positive role of our industry delivering societal outcomes…

- If everyone in the 27 countries would do at least 150 minutes of moderate-intensity exercise per week, 10,331 premature deaths (defined as deaths of people aged 30 to 70 years) would be avoided every year. ***This is similar to the number of deaths due to COVID-19 in that same age group in France and Germany combined in 2020***. The five countries with the largest burden (Germany, France, Italy, Spain and Poland) make up three-fifths (62%) of the total burden across the 27 countries. While these are all countries with large populations, some smaller countries like Belgium and the Czech Republic also make up a considerable share of the total premature mortality burden. If the higher recommendations of 300 minutes of physical activity per week were met by everyone, nearly 30,000 premature deaths could be avoided per year.
- If people who currently do less than 150 minutes of physical activity per week were to increase their physical activity to this target, their life expectancy would increase by 7.5 months. Their healthy life expectancy, which takes into account years lived with diseases, would increase by 7.9 months. If everyone who is now doing less than 300 minutes of physical activity per week would increase their activity to this level, their life expectancy would increase by more than a year (15.7 months).
- At a population level, insufficient physical activity reduces the average life expectancy in the 27 EU Member States by 1.9 months. When assuming a higher cut-off of 300 minutes, insufficient physical activity reduces life expectancy by 5.1 months. In other words, if everyone in the 27 countries would do at least 300 minutes of moderate-intensity physical activity per week, the average life expectancy of the total population would increase by nearly half a year. In comparison, EU Member States saw an average increase in life expectancy of 2.4 months per year between 2005 and 2018, due to advancements in health care, improvements in working and living conditions, healthier lifestyles and other factors (OECD/European Union, 2020[89]).
- In the 27 countries, doing less than 150 minutes of moderate-intensity exercise per week is linked to 3.5 million new cases of depression between 2022 and 2050, as well as 3.8 million new cases of cardiovascular disease, nearly 1 million new cases of type 2 diabetes and over 400 000 new cancers. Across the 12 diseases affected by physical activity in the model, doing at least 150 minutes of physical activity could prevent 11.5 million new NCDs over the next 29 years. Meeting the target of 300 minutes of physical activity per week would prevent a further 16 million cases.
- The majority of disease cases due to insufficient physical activity affect people between the age of 50 and 79 years. Cardiovascular diseases account for 40% of all diseases due to insufficient physical activity in people aged 60 to 79 years, and nearly three-fourths of the burden for people over 80 years old. While cancers and cardiovascular diseases are rarer in the younger age groups, insufficient physical activity does cause a considerable burden of depression and back pain in this population. Notably, in the over-80 age

88 OECD and WHO/Europe. ***Step up! Tackling the Burden of Insufficient Physical Activity in Europe***, Feb. 2023. https://www.oecd-ilibrary.org/sites/500a9601-en/index.html?itemId=/content/publication/500a9601-en

89 OECD/European Union (2020), ***Health at a Glance: Europe 2020: State of Health in the EU Cycle***, OECD Publishing, Paris, https://doi.org/10.1787/82129230-en

group there is a decrease in back pain issues due to insufficient physical activity. This is likely the result of the decrease in life expectancy associated with insufficient physical activity, which reduces the number of people in this age group and consequently the number of diseases they develop.

- If everyone were to meet the minimum physical activity guidelines of at least 150 minutes of moderate-intensity physical activity per week, 3.9% of all new type 2 diabetes cases would be avoided between 2022 and 2050, as well as 2.3% of cardiovascular disease cases. Meeting the upper guidelines of 300 minutes of physical activity per week would prevent nearly 10% of new diabetes cases, 5.2% of new cardiovascular disease cases, and around 4% of new cancer cases.

And if we focus specifically in exploring the burden of insufficient physical activity on health care expenditure, the analysis completed identified that increasing physical activity can save nearly EUR PPP 8 billion per year in health care expenditure…

- *If everyone were to do at least 150 minutes of physical activity per week, a total of EUR PPP[90] 7.7 billion per year could be saved in health care expenditure across the 27 countries* – more than the total annual health care expenditure of Lithuania and Luxembourg combined. A large part of the burden is in countries with large populations and high health care expenditure levels, such as Germany, Italy and France.
- ***Countries with higher health care expenditures in general tend to spend more on treating diseases linked to insufficient physical activity, and vice versa***. However, the prevalence of insufficient physical activity also plays an important role: while per capita health care expenditure in Malta, Portugal and Italy is around the EU average, the high prevalence of insufficient physical activity in these countries means that the associated health care expenditure is higher than the average. The 27 countries included in the analysis could save on average EUR PPP 14.4 per capita per year between 2022 and 2050 if everyone met at least the minimum physical activity guidelines of 150 minutes of exercise per week. Meeting the guidelines of 300 minutes per week would save another EUR PPP 17.7 per capita, for a total of EUR PPP 32.2 per capita, per year.
- *EU Member States could save on average 0.6% of their health care expenditure if everyone did at least 150 minutes of physical activity per week*. If everyone were to meet the 300 minutes guidelines, this would save 1.2% of total health care expenditure. The potential savings from doing at least 150 minutes of physical activity range from 0.16% of total health care expenditure in Estonia, to 1.2% in Malta.

90 Purchasing Power Parities (PPPs) are the rates of currency conversion that try to equalise the purchasing power of different currencies, by eliminating the differences in price levels between countries.

3.2. The broader macroeconomic effects of physical activity…

In a very interesting analysis completed by Hafner and colleagues (2020)[91], the authors recognized that "*given finite financial resources and competing health priorities, including resources dedicated to public health responses to address the physical inactivity challenge have been inadequate*". Economic analysis can help in this regard to quantify the scale of the problem, increase public, policy and industry engagement and offer data for use in public health advocacy.

Existing studies that analyse the economic burden of insufficient physical activity (Ding et al., 2016[92]; Ding et al., 2017[93]) are typically conducted at the national level and apply the cost-of-illness (COI) approach, varying in costs (eg, direct and indirect) and health conditions considered. Nevertheless, and as we identified and discussed previously, they all find substantial potential savings and health benefits from a more physically active population (Cadilhac et al, 2011[94]; Pérez et al., 2017[95]; Katzmarzyk, 2011[96]; Shephard, 2016[97]).

As Keogh-Brown and colleagues explain in further detail (Keogh-Brown et al., 2016[98]), such COI studies often disregard long-term and second-order effects, limiting the scope of the analysis and thus potentially underestimating the overall costs.

Key message:

"…healthier individuals may live longer and may be more productive than non-healthy individuals, earning more income and consuming more over time. The benefits of being healthier then apply not only to the individual themselves but also create positive external effects in the economy (eg, on firms, the government) because they may consume more, save more and pay more taxes for longer".

(Hafner et al., 2020)

91 Hafner M, Yerushalmi E, Stepanek M, et al. Estimating the global economic benefits of physically active populations over 30 years (2020–2050). ***Br J Sports Med*** 2020;54:1482–1487.
92 Ding D, Lawson KD, Kolbe-AlexanderTL, et al. The economic burden of physical inactivity: a global analysis of major non-communicable diseases. Lancet 2016;388:1311–24
93 Ding D, Kolbe-Alexander T, Nguyen B, et al. The economic burden of physical inactivity: a systematic review and critical appraisal. Br J Sports Med 2017;51:1392–409.
94 Cadilhac DA, Cumming TB, Sheppard L, et al. The economic benefits of reducing physical inactivity: an Australian example. Int J Behav Nutr Phys Act 2011;8:99.
95 Pérez K, Olabarria M, Rojas-Rueda D, et al. The health and economic benefits of active transport policies in Barcelona. J Transp Health 2017;4:316–24.
96 Katzmarzyk P. The economic costs associated with physical inactivity and obesity in Ontario. Health Fitness J Canada 2011;4:31–40.
97 Shephard RJ. The economic benefits of increased physical activity as seen through an objective lens. in the objective monitoring of physical activity: contributions of Accelerometry to epidemiology, exercise science and rehabilitation. Basel, Switzerland: Springer, 2016: 313–33.
98 Keogh-Brown MR, Jensen HT, Arrighi HM, et al. The impact of Alzheimer's disease on the Chinese economy. EBioMedicine 2016;4:184–90

In fact, the model used in the interesting Hafner and colleagues' study (2020) links physical inactivity with the labour supply through excess mortality and reduced productivity and estimates the potential economic benefits of increasing national physical activity levels to the lower bound of the range recommended by the 2020 WHO guidelines (Bull et al., 2020[99]).

So, the authors identified that the positive economic implications of improved physical activity are reflected by an ***increase in the effective labour supply*** through a combination of two elements:

1. improved physical activity increases the size of the labour force through a lower mortality risk, and
2. improved physical activity raises worker productivity levels by reducing sickness absence and presenteeism.

These links between physical activity and productivity at work are assumed to manifest through sickness absence and presenteeism, generally defined as "showing up for work when one is ill" (Johns, 2010[100]).

In the study by Hafner et al (2020), involving the use of proprietary data from employers and employees in the UK, Australia, Malaysia, Hong Kong, Thailand, Singapore and Sri Lanka collected through *Vitality's Britain's Healthiest Workplace Survey*[101] and *AIA Group Vitality's Asian Healthiest Workplace Survey*[102], the team included two annual survey waves (2017–2018) for the UK and three (2017–2019) for the Asian countries, covering a total of 120,143 individuals (UK: 58,410; Asia: 61,733). Results showed that ***physical activity was associated with higher levels of workplace productivity***, with individuals doing 600–750 MET-minutes of physical activity per week reporting, on average, a 0.8–1.5 percentage point (pp) lower work impairment due to absence and presenteeism than inactive individuals (those performing less than the recommended 600 MET-minutes per week). And the productivity loss reduction increased with the level of physical activity reported.

At the same time, and based on their results, the authors discussed the perception that physical activity is assumed to affect productivity both directly and indirectly, through a range of mediation factors such as improved physical and mental health:

"*There are numerous benefits of improving physical activity, from better mental and physical health, lower all-cause mortality rates and higher workplace productivity to improved life satisfaction. While the direct economic benefits associated with lower cost of healthcare have been thoroughly investigated in prior literature, the broader macroeconomic benefits presented in our study have been missing from the overall picture*" (Hafner et al., 2020).

The analysis from Hafner et al (2020) suggests that improving physical activity in the population, for example, by making everyone adhere to the lower threshold of the 2020 WHO guidelines range (WHO-Bull et al., 2020) could be ***associated with outstanding economic benefits***, "*potentially adding trillions of dollars in added economic output over a 30-year period and providing a range of other benefits to the people affected*".

A critical argument discussed by the authors is the reality about the process of achieving such a change at the population, "*let alone on a global scale will be slow and difficult. GAPPA adopted a target of 15% relative reduction in the global prevalence of physical inactivity in adults and in adolescents by 2030, an extension of an earlier commitment by the WHO Member States of 10% by 2025. Although the current GAPPA target is significantly below the level of change assumed in our study, the associated benefits would remain substantial: using the methodology applied in this work, we estimate that by achieving the GAPPA target, US$25.0–36.5 billion could be added to the global GPD annually by 2030*".

99 Bull FC, Al-Ansari SS, Biddle S, et al. World Health organization 2020 guidelines on physical activity and sedentary behaviour. Brit J Sport Med. doi: 10.1136/bjsports-2020-102955

100 Johns G. Presenteeism in the workplace: a review and research agenda. J Organ Behav 2010;31:519–42.

101 See ***www.rand.org/randeurope/research/projects/britains-healthiest-workplace.html*** for more information.

102 See ***www.rand.org/randeurope/research/projects/asia-s-healthiestworkplace.html*** for more information.

And finally, they highlight as well that their study did not consider the direct healthcare cost associated with physical activity, estimated at an additional US$53.8 billion annually (Ding et al., 2016). They confirmed also do not directly quantify the intangible effects from being more physically active, such as higher life satisfaction or happiness. However, it is important to highlight that this analysis did not consider in detail the potential cost associated with getting people to be more active. Such costs could include the direct costs of interventions and the unobserved negative utility cost for people who dislike physical activity. Utility costs are difficult to measure and monetise but could in principle for some individuals be larger than the benefits of getting them to be more active (Hafner et al., 2020).

Accordingly to Hafner et al. (2020), only another study has assessed the macroeconomic benefits of getting people to be more physically active, looking specifically at the Canadian economy (Bounajm, Dinh, Thériault, 2014[103]). Considering reductions in premature mortality, sickness absence and disability, this new study estimated that getting 10% of Canadians with suboptimal levels of physical activity to exercise more would increase Canada's GDP by CAN$7.5 billion cumulatively between 2015 and 2040.

A final study by PJM Economics (2019[104]) estimated the potential benefit of improved productivity due to higher levels of physical activity to UK businesses at £6.6 billion per year, broadly in line with Hafner and colleagues (2020) findings for the UK.

Key message: Challenges related to the macroeconomics effects of promoting active living that will be addressed by the EDH project…

The survey data used in the referred studies and reports (Hafner at al., 2020; Bounajm, Dinh, Thériault, 2014; PMJ Economics, UK) to examine this unique association between physical activity and productivity are self-reported. This may lead to over-reporting of certain lifestyle factors, such as physical activity, or under-reporting negative habits, such as smoking or alcohol consumption.

*Aiming to avoid this challenge we are building up the **European DataHub project**, allowing direct tracking and monitoring of physical activity and sports participation in real time across EU. This unique data base will provide high-quality reliable behavioural data at population level.*

103 Bounajm F, Dinh T, Thériault L. Moving ahead: the economic impact of reducing physical inactivity and sedentary behaviour. Ottawa, Canada: The Conference Board of Canada, 2014.

104 PJM Economics. The economics of exercise. measuring the business benefit of being physically fit, 2019. Available: https://www.axappphealthcare.co.uk/globalassets/news-articles-page/pjm-economics-theeconomics-of-excercise-september-2019.pdf

3.3. Social Value of participation in physical activity and sports

There is a growing demand globally, for policy makers, practitioners, and academics to measure the broad benefits of sport and physical activity at the individual, community, and population level. Whilst some benefits of physical activity and sport have been evidenced through research, often these benefits have focused on physical health, with limited high-quality evidence on the wellbeing and social benefits quantified at scale. This is due to significant research gaps but also due to a lack of global consistency of what benefits to assess and a lack of robust tools and methods to accurately measure associated outcomes. In response to the growing need to advocate for the broad benefits of Sport and Physical Activity, we urgently **need to understand the social benefits and value of participation**.

Prof. Larissa Davies[105], and her team at the ***Sports Industry Research Centre of Sheffield Hallam University***[106], are one of the leading groups in the world in the field of social value impact from sports and physical activity. In one of their key publications Prof. Davies highlights that: "***recent and historical evidence suggests that sport creates societal benefits in terms of improved health, reduced crime, improved education, and enhanced subjective well-being. However, there is limited empirical research on the monetary value of these non-market outcomes for society***" (Davies et al., 2019[107]).

"*More broadly, Physical Activity and Sport (PAS) interventions can reduce the social and economic burden of noncommunicable diseases and improve the wellbeing of the population*" (Davies et al., 2019). A particular research and evaluation model, ***Social Return On Investment*** (SROI) has the capacity to measure broader socio-economic outcomes in a singular monetary ratio to help identify the most impactful and cost-beneficial intervention (Gosselin et al., 2020[108]).

As Davies et al. (2019) defined, "***social impact*** *is a term used widely within academic literature and across government policy. It is a term which encompasses both social benefits and costs, and specifically those which are non-traded, i.e. not part of the market system. SROI research adopts an inclusive definition of social benefits and costs, embracing both social and private domains. First, it includes benefits and costs which affect someone other than the direct participant, e.g. through externalities and public goods*". Accordingly to the authors (Davies et al., 2019), they include the following:

- changes in health care costs, derived from health changes of individuals;
- changes in criminal justice system costs, derived from changes in crime and antisocial behaviour and in pro-social behaviour and citizenship;
- the value of changes in human capital and productivity for society, derived from education changes for individuals;
- the value of changes in social capital, derived from bonding, bridging and linking capital changes; and changes in volunteering.

105 https://www.shu.ac.uk/about-us/our-people/staff-profiles/larissa-davies
106 https://www.shu.ac.uk/sport-physical-activity-research-centre/sport-industry
107 Larissa E. Davies, Peter Taylor, Girish Ramchandani & Elizabeth Christy (2019) Social return on investment (SROI) in sport: a model for measuring the value of participation in England, International Journal of Sport Policy and Politics, 11:4, 585-605, DOI: 10.1080/19406940.2019.1596967
108 Gosselin, V., Boccanfuso, D. & Laberge, S. Social return on investment (SROI) method to evaluate physical activity and sport interventions: a systematic review. ***Int J Behav Nutr Phys Act* 17,** 26 (2020). https://doi.org/10.1186/s12966-020-00931-w

"*Second, it includes relevant benefits and costs which affect individuals (in the case of sport those affect sport participants and volunteers, because they are part of society). This includes personal subjective well-being benefits and costs from participating and volunteering in sport*" (Davies et al., 2019). Subjective well-being is defined as life satisfaction or happiness pertaining to the individual (Bridges, 2006[109]; Galloway et al., 2006[110]).
As discussed previously, the purpose of this project is to support the development of high-quality research able to put a monetary value on the wider social impact of sport (and physical activity), and in doing so identify and inform policy makers of the relative importance of different social outcomes to society. It seeks to apply an existing approach to social impact measurement, in a new sector-wide context, discussing it broadly and extensively with stakeholders and experts globally, with the aim of achieving results which are as robust as possible, while being careful not to overclaim.

"The past decade has seen shift in focus towards quantifying the significant health savings from increased participation in physical activity (and sports), and further into the realm of quantifying critical but difficult to monetise social outcomes. These include improvements in subjective well-being and social inclusion. These social benefits seem most suited to be measured and valued under the social return on investment [SROI] model, with use of proxy values. With the sport and active recreation sector competing for highly competitive Government-funding under 'best-buy' scenarios, the refinement and development of models that capture the value created through the well-documented and wide-ranging value areas appears central to sport development and promotion" (Keane et al., 2019)[111]

Research published in 2019 aimed to calculate the social impact of sport in England, using a **Social Return on Investment** (SROI) framework (Davies et al, 2019). It was the first time an SROI framework has been used to value the sports sector at the national level. Davies and colleagues suggested that in 2013/14 the social value of sports participation in England was £44.8 billion and the total financial and non-financial inputs to sport were £23.5 billion, giving an SROI ratio of 1.91. This means that for every £1 invested in sport, £1.91 worth of social benefit was generated (Davies et al., 2019).

Establishing a SROI framework, that provides policymakers with evidence-based research upon which to better articulate the case for investment in sport, is a crucial first step in the process. This framework can then be used

109 Bridges, B., 2006. Fun, fervor or fitness?: sporting cultures and happiness. *In:* Ng, Y.K., and Ho, P.L.S. ***Happiness and public policy: theory, case studies, and implications.*** Palgrave Macmillan, 221-234.
110 Galloway S., ***et al.,*** 2006. ***Quality of life and well-being: Measuring the benefits of culture and sport: literature review and thinkpiece.*** Edinburgh: Scottish Executive Education Department.
111 Lewis Keane, Erin Hoare, Justin Richards, Adrian Bauman & William Bellew (2019): Methods for quantifying the social and economic value of sport and active recreation: a critical review, ***Sport in Society***, DOI: 10.1080/17430437.2019.1567497

to benchmark progress and continue to build on the extant data that demonstrates that sport, physical activity and exercise creates value to society across multiple social outcomes, making it a cost-effective investment for addressing social issues across multiple public policy areas.

Key message:

"To capitalize on what is known about the wider social return from sport and transform the way in which we serve the public, the whole sector must integrate the open reporting of social and economic impacts in its DNA. This means industry leaders and service organizations, community groups and professionals working collectively to change the perceived value of sport and physical activity to policy makers and commissioners in different sectors".

(Jimenez, Mayo, Copeland, 2020[112])

3.3.1. The positive effects of physical activity on academic achievement of school-age children and adolescents

An interesting umbrella review developed in 2020 by WHO Europe[113] aimed to summarise the evidence presented in systematic reviews and meta-analyses regarding the ***effect of physical activity on academic achievement of school-age children and adolescents***. A scientific paper was published by Barbosa and colleagues (Barbosa et al., 2020[114]), including the full study methods, results and discussion.

The authors highlighted that "*while there is no clear evidence that increased PA during childhood is associated with increased PA as an adult (Herman et al., 2009)[115], it has been shown that higher AA is associated with higher socioeconomic status (SES) as an adult, independently of SES at birth (Ritchie, Bates, 2013[116]). SES is a key determinant of health throughout the life course, and therefore, interventions that promote Academic Achievement (AA) may have far-reaching economic and health-promoting effects for students. Thus, in addition to directly enhancing physical health, PA may also have an indirect effect on health if it promotes academic achievement*" (Barbosa et al., 2020).

112 Jimenez, A., Mayo, X., Copeland, R.J. (2020). ***The Economic and Social Impact of promoting active living after the COVID-19 crisis. The role, value and impact of a proactive and responsible health and fitness industry.*** https://www.europeactive.eu/sites/europeactive.eu/files/covid19/Economic-Social-Impact_050620.pdf

113 https://www.who.int/europe/news/item/17-02-2021-who-reviews-effect-of-physical-activity-on-enhancing-academic-achievement-at-school

114 Barbosa, A.; Whiting, S.; Simmonds, P.; Scotini Moreno, R.; Mendes, R.; Breda, J. Physical Activity and Academic Achievement: An Umbrella Review. ***Int. J. Environ. Res. Public Health*** **2020**, *17*, 5972. https://doi.org/10.3390/ijerph17165972

115 Herman, K.M.; Craig, C.L.; Gauvin, L.; Katzmarzyk, P.T. Tracking of obesity and physical activity from childhood to adulthood: the Physical Activity Longitudinal Study. ***Int. J. Pediatr. Obes.*** **2009**, *4*, 281–288

116 Ritchie, S.J.; Bates, T.C. Enduring links from childhood mathematics and reading achievement to adult socioeconomic status. ***Psychol. Sci.*** **2013**, *24*, 1301–1308.

The concept of "*academic achievement*" is an interesting and challenging one to understand, but it is important to note that the "*concept encompasses a broad range of outcomes that are influenced by cognitive, social, and environmental factors*" (Bean et al., 2003[117]). While the academic literature mainly employs grades and test results to quantify AA, more qualitative social and interpersonal outcomes of education are also vital for health and wellbeing. For the purposes of the Barbosa et al.´s review (2020), "*academic achievement can be broadly defined as to what extent a student, teacher, or school has met their academic goals*". In the research context, this is measured in different ways, most commonly using test scores and teacher-assigned grades (Ritchie, Bates, 2013). AA is affected by several factors, including individual characteristics (motivation, perception of wellbeing, quality of life and parents' support, involvement in activities, and motivation), school characteristics (human and material resources, class size, teaching, rewards, extra-curricular activities, technology, evaluation system, facilities), family support (home environment, provision of resources, the attitude of family members, education, SES, family size) (Engin-Demir, 2009[118]), and community facilities (youth clubs, gyms, outdoor pursuits) (WHO, 2016[119]).

Higher levels of PA are not only fully compatible with schools' mandate to promote the health of their students, but, according to the literature, they are also unlikely to have adverse effects on learning (Donnelly et al., 2009[120]). Part of the effect of PA on AA is likely mediated via the brain's executive functions (Donnelly et al., 2016[121]), with PA inducing, neural growth, and modification in synaptic transmission, resulting in changes in thinking, decision-making, and, particularly in the prefrontal cortex (Kopp, 2012[122]). Acute PA increases physiological arousal, and thus attention and triggers the release of neurotransmitters that are thought to enhance cognitive processes. Aerobic PA that increases cardiovascular fitness is considered to improve brain function through neurogenesis and angiogenesis in areas responsible for memory and learning, as well as to promote cognition via changes such as increased oxygen saturation and glucose delivery (Álvarez-Bueno et al., 2016[123]). Furthermore, there is evidence that regular PA promotes positive self-perception, emotional regulation, and cognitive functioning, all of which may be factors that contribute to enhancing AA (Álvarez-Bueno et al., 2016; Tomporowsky et al., 2015[124]).

But if we focus on WHO Europe/Barbosa et al. recent review outcomes (2020), it summarises the evidence of 41 systematic reviews and meta-analyses examining the relationship between physical activity and AA in school-aged children and adolescents. Overall, the findings from this work suggest that PA has a null or small to medium effect on AA in school-age children and adolescents. The majority of the included reviews were scored as 'low-quality' or 'critically low-quality' when assessing the methodological quality. Many reviews did not include risk of bias scoring, and did not report details of participant and assessor blinding, or provided insufficient information regarding concealment of allocation to the intervention or the control group (Li et al., 2017[125]) and, therefore, incorporated low-quality evidence to draw their conclusions, especially the oldest publications.

117 Bean, R.A.; Bush, K.R.; McKenry, P.C.; Wilson, S.M. The Impact of Parental Support, Behavioral Control, and Psychological Control on the Academic Achievement and Self-Esteem of African American and European American Adolescents. ***J. Adolesc. Res.*** **2003**, *18*, 523–541

118 Engin-Demir, C. Factors influencing the academic achievement of the Turkish urban poor. ***International Journal of Educational Development*** **2009**, *29*, 17–29

119 World Health Organization. ***Physical Activity Strategy for the WHO European Region 2016-2025***; WHO Regional Office for Europe: Copenhagen, Denmark, 2016

120 Donnelly, J.E.; Greene, J.L.; Gibson, C.A.; Smith, B.K.; Washburn, R.A.; Sullivan, D.K.; DuBose, K.; Mayo, M.S.; Schmelzle, K.H.; Ryan, J.J.; et al. Physical Activity Across the Curriculum (PAAC): a randomized controlled trial to promote physical activity and diminish overweight and obesity in elementary school children. ***Prev. Med.*** **2009**, *49*, 336–341.

121 Donnelly, J.E.; Hillman, C.H.; Castelli, D.; Etnier, J.L.; Lee, S.; Tomporowski, P.; Lambourne, K.; Szabo-Reed, A.N. Physical activity, fitness, cognitive function, and academic achievement in children: A systematic review. ***Med. Sci. Sports Exerc.*** **2016**, *48*, 1197–1222.

122 Kopp, B. A simple hypothesis of executive function. ***Front. Hum. Neurosci.*** **2012**, *6*, 159.

123 Álvarez-Bueno, C.; Pesce, C.; Cavero-Redondo, I.; Sánchez-López, M.; Pardo-Guijarro, M.J.; Martínez-Vizcaíno, V. Association of physical activity with cognition, metacognition and academic performance in children and adolescents: a protocol for systematic review and meta-analysis. ***BMJ Open*** **2016**, *6*, e011065.

124 Tomporowski, P.D.; McCullick, B.; Pendleton, D.M.; Pesce, C. Exercise and children's cognition: The role of exercise characteristics and a place for metacognition. ***J. Sport Health Sci.*** **2015**, *4*, 47–55.

125 Li, J.W.; O'Connor, H.; O'Dwyer, N.; Orr, R. The effect of acute and chronic exercise on cognitive function and academic performance in adolescents: A systematic review. ***J. Sci. Med. Sport*** **2017**, *20*, 841–848.

If we look at the opportunities to improve the quality of interventions promoting active living in these population groups and its accessibility to amplify social impact, Barbosa et al. (2020) identified that at community level, safe environments are needed to enable regular PA and active commuting to and from school. At the same time, ***availability of sports and fitness clubs/gyms***, community youth clubs, such as scouts, can also increase opportunities while a range of age- and gender-specific forms of PA need to be available, especially for adolescents. In this regard, awareness of the availability of opportunities could be raised through information and communication technology, social media approaches, and community and youth organisations (WHO, 2016).

Finally, the authors recognised that there are a number of areas for potential future research to improve the quality of the current evidence that can be highlighted, with "*the most prominent being the need to establish the causality of the relationship between PA and AA*". Insights may be gained from conducting high-quality RCTs with a number of different PA intervention arms in addition to a non-active control group (Singh et al., 2019[126]).

Another very interesting and recent systematic review and meta-analysis (Owen et al., 2022[127]), was the first published to assess the specific association between sport participation and academic performance in children and adolescents. In this case, the authors highlighted that "*Physical activity can improve academic performance; however, much less is known about the specific association between sport participation and academic performance, and this evidence has not been synthesized". The results of this study showed that sports participation had a small to moderate positive association with academic performance. However, most studies analysed were of low quality, and there was high heterogeneity between studies. Owen and colleagues concluded that "if this field were to inform policy, high-quality studies are needed that provide insight into the effect of dose and sport characteristics on academic performance*" (Owen et al., 2022).

3.3.2. Role of sports participation and physical activity in crime prevention

Accordingly to a recent systematic review and meta-analysis completed by Jugl, Bender and Lösel (2021[128]), focusing on the effectiveness of sports programmes preventing crime and reducing reoffending, the authors highlight what has been advertised in policies since the 1960s: *sports are believed to strengthen positive behavior and, among other positive outcomes, to prevent criminal activity* (Smith and Waddington, 2004[129]). Therefore, sports programmes are frequently implemented aiming to reduce and prevent crime, delinquency, and violent behavior (Hartmann 2001[130]; Public Safety Canada 2017[131]).

126 Singh, A.S.; Saliasi, E.; Van Den Berg, V.; Uijtdewilligen, L.; De Groot, R.H.M.; Jolles, J.; Andersen, L.B.; Bailey, R.; Chang, Y.K.; Diamond, A.; et al. Effects of physical activity interventions on cognitive and academic performance in children and adolescents: A novel combination of a systematic review and recommendations from an expert panel. ***Br. J. Sports Med.*** **2019**, *53*, 640–647.

127 Owen KB, Foley BC, Wilhite K, Booker B, Lonsdale C, Reece LJ. Sport Participation and Academic Performance in Children and Adolescents: A Systematic Review and Meta-analysis. Med Sci Sports Exerc. 2022 Feb 1;54(2):299-306. doi: 10.1249/MSS.0000000000002786.

128 Jugl, I. & Bender, D., Lösel, F. (2021). Do Sports Programs Prevent Crime and Reduce Reoffending? A Systematic Review and Meta-Analysis on the Effectiveness of Sports Programs. ***Journal of Quantitative Criminology***. 10.1007/s10940-021-09536-3

129 Smith A, Waddington I (2004) Using 'sport in the community schemes' to tackle crime and drug use among young people: some policy issues and problems. ***Eur Phy Educ Rev*** 10(3):279–298. https://doi.org/10. 1177/1356336X04047127

130 Hartmann D (2001) Notes on Midnight Basketball and the cultural politics of recreation, race, and at risk urban youth. J Sport Soc Issues 25(4):339–371. https://doi.org/10.1177/0193723501254002

131 Public Safety Canada (2017) Sports-based crime prevention programs. Available from: URL: https://www. publicsafety.gc.ca/cnt/rsrcs/pblctns/index-en.aspx

In fact, they summarized that in **primary prevention**, aimed at the general population, sports are often used to promote positive development in children and adolescents (Fraser-Thomas et al. 2005[132]; Lösel 2012[133]). They are also implemented in **secondary prevention** for at-risk persons, and in **tertiary prevention** for people who have already committed crimes (Public Safety Canada 2017). Within the latter context sports programmes are implemented in prisons as well as in the community (Ekholm 2013[134]; Meek 2014[135]; Nichols 2007[136]). Most commonly, sports programmes are implemented for promoting prosocial behavior and a generally desirable development in young people (Ekholm and Holmlid 2020[137]) as well as in correctional settings (Neeten 2020[138]).

A very interesting element considered at Jugl and colleagues review (2021) was the potential role of physical activity and exercise influencing positive social behaviours and avoiding violent ones. As such, "*regular physical activity has been found to positively influence the production of hormones, which in turn decrease and inhibit violent behavior, it can thus be assumed that sports participation and/or an active lifestyle involving daily exercise may reduce aggressiveness and violence*" (Çetin et al. 2017[139]; Gligoroska and Manchevska 2012[140]; van der Gronde et al. 2014[141]).

But the authors recognized that studies with lower quality often report higher effects, which might lead to an overestimation of the true effects (Dreier 2013[142]; Weisburd et al. 2001[143]). In any case, and despite limitations, their findings suggest that sports programmes can prevent crime and delinquency and reduce reoffending. The programmes analysed at their work also showed significant effects on indirect or mediating psychological factors underlying delinquency, such as psychological well-being where regular physical activity and exercise play a significant role. Finally, the authors concluded that more well-controlled studies are necessary to determine which context factors influence these underlying mechanisms and how these can be promoted. Then future research should address aspects connected to the roles of peers and coaches on the programmes, types of sports and/or physical activity interventions, implementation models, and potential gender differences. Additionally, evaluations need to draw on better scientific designs to strengthen the validity of the results (Jugl, Bender and Lösel (2021).

132 Fraser-Thomas JL, Côté J, Deakin J (2005) Youth sport programs: an avenue to foster positive youth development. Phys Educ Sport Pedagogy 10(1):19–40. https://doi.org/10.1080/1740898042000334890
133 Lösel F (2012) Entwicklungsbezogene Prävention von Gewalt und Kriminalität. Forensische Psychiatrie, Psychologie, Kriminologie 6(2):71–84. https://doi.org/10.1007/s11757-012-0159-2
134 Ekholm D (2013) Sport and crime prevention: Individuality and transferability in research. Journal of Sport for Development 1(2):1–12
135 Meek R (2014) Sport in prison: exploring the role of physical activity in correctional settings. London, Routledge.
136 Nichols G (2007) Sport and crime reduction: The role of sports in tackling youth crime. London, Routledge.
137 Ekholm D, Holmlid S (2020) Formalizing sports-based interventions in cross-sectoral cooperation: governing and infrastructuring practice, program, and preconditions. J Sport Develop 8(14):1–20
138 Neeten M (2020) The role of sport in the context of violence, crime, radicalisation and (violent) extremism. International Council of Sport Science and Physical Education. https://www.icsspe.org/content/speysport-prevention-extremism-youth
139 Çetin FH, Torun YT, Güney, E (2017) The role of serotonin in aggression and impulsiveness. In: Shad K.F. (ed.). Serotonin, A Chemical Messenger Between All Types of Living Cells: InTech. Available from https://www.researchgate.net/publication/318722136_The_Role_of_Serotonin_in_Aggression_and_Impulsiveness
140 Gligoroska JP, Manchevska S (2012) The efect of physical activity on cognition - physiological mechanisms. Mater Sociomed 24(3):198–202. https://doi.org/10.5455/msm.2012.24.198-202
141 van der Gronde T, Kempes M, van El C, Rinne T, Pieters T (2014) Neurobiological correlates in forensic assessment: A systematic review. PLoS ONE 9(10):e110672. https://doi.org/10.1371/journal.pone.0110672
142 Dreier M (2013) Quality assessment in meta-analysis: Assessing the validity of study outcomes. In: Doi SAR, Williams GM (eds) Methods of clinical epidemiology. Springer, Berlin, pp 213–228.
143 Weisburd D, Lum C, Petrosino A (2001). Does research design afect study outcomes in criminal justice? Ann Am Acad Political Soc Sci, 578:50–70.

3.3.3. Impact of sports and physical activity in Subjective Wellbeing

As discussed previously in this report, and accordingly to Taylor and colleagues (2015), there is *a potential* ***positive impact of sports and physical activity in Subjective Wellbeing***. *In this case, "it is the manifestation of the catalytic role that sport, physical activity and/or exercise play in stimulating social impacts. Without a sense of wellbeing from participating, people would not sign up to sport/exercise; and without a sense of wellbeing from participating, people would not play/practice as frequently as they do*" (Taylor, Davies et al., 2015). However, there is a growing increase in empirical research on the monetary value of these non-market outcomes for society.

In chapter 7 of an interesting report from OECD (2018[144]), focused on the evaluation of subjective wellbeing[145], the authors reported that "*last decade has witnessed an exponential growth in research on subjective well-being, also referred to as happiness (MacKerron 2012146; Mackie and Smith, 2015147), and, to a lesser extent, on subjective well-being valuation (Welsch and Kuhling, 2009148; Ferreira and Moro, 2010149). In parallel, using subjective well-being measures to appraise policies, inform policy design and monitor progress has become increasingly popular in the public policy sphere (Fujiwara and Campbell, 2011150; Dolan et al., 2011151; OECD, 2013152; Tinkler, 2015153; Fujiwara and Dolan, 2016154)*".

In 2014 the *Department for Culture, Media, and Sport* (DCMS) in UK commissioned researchers from the London School of Economics (LSE) to undertake analysis of Understanding Society data to develop the evidence base on the subjective wellbeing impacts of cultural engagement and sport participation. This work provided new evidence of the link between policies and the social impacts of engagement in both sport and culture (Fujiwara, Kudrna, Dolan, 2014[155]). The study identified that ***sport participation was found to be associated with higher subjective wellbeing*** (connected to life satisfaction). This increase was valued at £1,127 per person per year, or £94 per person per month.

144 OECD (2018), ***Cost-Benefit Analysis and the Environment: Further Developments and Policy Use***, OECD Publishing, Paris, https://doi.org/10.1787/9789264085169-en

145 Subjective well-being (SWB) refers to self-reported measures of personal well-being, usually collected via surveys.

146 MacKerron, G. (2012), "Happiness economics from 35 000 feet", ***Journal of Economic Surveys***, Vol. 26(4), pp. 705-735, http://dx.doi.org/10.1111/j.1467-6419.2010.00672.x

147 Mackie, C. and C. Smith, (2015), "Conceptualizing subjective well-being and its many dimensions – implications for data collection in official statistics and for policy relevance", ***Statistics in Transition***, Vol. 16(3), pp. 335-372.

148 Welsch, H. and J. Kuhling (2009), "Using happiness data for environmental valuation: Issues and applications", ***Journal of Economic Surveys***, Vol. 23(2), pp. 385-406, http://dx.doi.org/10.1111/j.1467-6419. 2008.00566.x

149 Ferreira, S. and M. Moro (2010), "On the use of subjective well-being data for environmental valuation", ***Environmental and Resource Economics***, Vol. 46(3), pp. 249-273, http://dx.doi.org/10.1007/s10640-009-9339-8.

150 Fujiwara, D. and D. Campbell, (2011), ***Valuation Techniques for Cost Benefit Analysis: Stated Preference, Revealed Preference and Subjective Well-Being Approaches***, HM Treasury, London, www.gov.uk/government/uploads/system/uploads/attachment_data/file/209107/greenbook_valuationtechniques.pdf

151 Dolan, P., R. Layard and R. Metcalfe (2011), "Measuring subjective well-being for public policy: recommendations on measures", ***Special Paper*** No. 23, Centre for Economic Performance, London School of Economics and Political Science, London, http://cep.lse.ac.uk/pubs/download/special/cepsp23.pdf

152 OECD (2013), ***OECD Guidelines on Measuring Subjective Well-being***, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264191655-en

153 Tinkler, L. (2015), "The Office for National Statistics experience of collecting and measuring subjective well-being", ***Statistics in Transition***, Vol. 16(3), pp. 373-396.

154 Fujiwara, D. and P. Dolan (2016), "Happiness-Based Policy Analysis", Chapter 10 in Adler, M.D. and M. Fleurbaey (eds.) (2016) ***The Oxford Handbook of Well-Being and Public Policy,*** Oxford University Press.

155 Fujiwara, D., Kudrna L., Dolan, P. Quantifying and Valuing the Wellbeing Impacts of Culture and Sport. Department for Culture, Media & Sport, London 2014. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/304899/Quantifying_and_valuing_the_wellbeing_impacts_of_sport_and_culture.pdf

At a recent discussion paper, MacLennan and Stead (2021[156]) identified that "*there are many different approaches which have been proposed* ***for incorporating robust life satisfaction impacts into the economic analysis used to inform policy decision-making***". Their paper sets out the range of approaches considered, alongside the pros and cons which have been raised through academic review. At their introductory executive summary, they noted "*… The preferred approach seeks to incorporate robust, causal estimates of wellbeing within the existing structures of social cost benefit analysis (SCBA) – i.e. translating wellbeing impacts into equivalent monetary values, which can be incorporated directly into SCBA*".
So, the authors, supported by a pool of wellbeing economists and experts, aimed to develop an approach "to monetising these causal estimates which:

- can achieve approximate consistency with existing government values that are accepted and used (e.g, the Value of a Statistical Life Year (SLY) and the value of a Quality Adjusted Life Year (QALY));
- fits within the existing theoretical framework of values used within SCBA;
- can be practically applied and is easy to adopt;
- is consistent with evidence on the link between wellbeing and income;
- is robust and based on published papers;
- does not lead to any unintended consequences or disadvantage for certain groups".

And based on the discussions and expert reviews which informed their paper, they stated: "on balance, the recommended approach is to use a linear conversion from wellbeing to money, using a range of values rather than a single point estimate" (MacLennan, Stead, 2021).

Subjective well-being valuation is a newly developed method that differs from other non-market valuation methods as values are based on how non-market goods impact on self-reported measures of well-being such as life satisfaction. In other words, ***the values are based on experienced rather than decision utility***. "*Less is known about the limitations and biases of this nascent SWB valuation approach. But overall, the SWB approach offers a promising new way of valuing non-market goods. Future research and applications will tell if this promise holds*" (OECD, 2018).

It is important to note that the SROI work carried out in the area of sports and physical activity by Prof. Davies and her team draws upon the work of the LSE team and Fujiwara.

Key message:

It is clear for us, from this preliminary contextual analysis about the challenges of the evaluation of the impact of Active Living on measures of subjective well-being (such as life satisfaction), that our industry needs to build solid evidence about its contribution to this unique outcome…

156 MacLennan, S., Stead, I. ***Wellbeing discussion paper: monetisation of life satisfaction effect sizes. A review of approaches and proposed approach***. HM Treasury, Social Impacts Task Force (SITF), London, 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005389/Wellbeing_guidance_for_appraisal_-_background_paper_reviewing_methods_and_approaches.pdf

#4. ESG (Environmental, Social and Governance), Social impact and the Investment landscape. Its impact in the growth of the industry (that will benefit the whole society…)

Steven Ward, Strategy & Innovation Director GO fit

4.1. Introduction

Is it possible to see a future in which high quality investors reviewing two peer group companies within an industry are forced by their investing criteria to choose the company that evidences that greatest contribution towards the clearly set sustainability priorities of the fund? Or possible to imagine a major property-based investor taking sustainability into consideration when evaluating two comparable proposals from potential tenants for a vacant unit? Or possible to foresee cities restricting construction based on the sustainability credentials of the applicant (or lack of)? Is this such a distant future at all, or more a common reality in some European markets?

The health and fitness industry is special. It helps people become healthier and happier. If it helps more people through its onward growth and expansion, our world will be healthier, happier, and more sustainable – especially if those people are increasingly diverse in nature to those who came before them. This could help lower healthcare costs while creating accessible jobs and adding money to the economy.

What other industries would do to have such a position! Consider how hard some of the largest companies in the world are working at this very minute to find ways to either transform their businesses entirely or offset their impact, given the destructive impact that have had on our natural environment or our prospects of long and fulfilled healthy lives.

Environmental, Social and Governance (ESG) considerations are playing an increasingly central role in the investor facing materials of some of the largest health and fitness companies in the world. Whether it is Basic Fit, Pure Gym, and Gym Group here in Europe, Smart Fit in Latin America or LifeTime in the U.S. the leading commercial engines of growth of our industry are highlighting their ESG credentials, making them a central feature of their proposition to current and future investors.[157]

Once considered the preserve of bare footed hooded jumper wearing corporate hippies, ESG is now a mainstream boardroom priority for enlightened companies across the globe. It is increasingly seen as triple win: a safer bet for the investors, a sounder way in which to manage a business, and a greater impact on the society in which we operate. Increasingly, this triple win is being seen as a key to unlock sources of investment on more attractive terms, from more credible partners, at a scale that once might not have been considered possible.

For the fitness sector which has (at times) seen companies in the hands of pernicious private equity investors of a more vulturous nature, it is a rather attractive idea to attract long term minded investors that are driven both by a desire for stable long-term returns AND a positive impact on society. ESG is a gateway to such a position.

157 For example, see "Basic Fit Investor Presentation," March 2023, https://www.shrunken.com/aqLiT

4.2. A primer on ESG

For the uninitiated, ESG covers a range of factors used by investors to assess the sustainability and social impact of any investment – including factors such as environmental impacts, social policies and governance factors that drive how organisations operate and take decisions.

It is now generally accepted that ESG can contribute to long term value creation and help investors identify risks and opportunities when considering the attractiveness of a company.

This has been backed up by serious research and evidence. Companies with strong sustainability performance outperformed their peers financially in both the short and long term according to a 2014 Harvard University study.[158] Such companies have a lower cost of capital, and this directly contributes to higher profitability – the holy grail of both investors and executives within companies according to MSCI.[159]

For this reason, we have seen some of the largest investors in the world shake markets and set the direction for the years to come with the level of commitment they have made to this topic.

Take Larry Fink at BlackRock, the world's largest asset manager with more than $9.5 trillion in assets under management. Reaffirming the firm's intention to prioritise ESG considerations in its long-term decisions, Fink used his 2022 letter to CEOs to say that "*companies perform better when they are deliberate about their role in society and act in the interests of their employees, customers, communities, and their shareholders.*"[160]

The argument of Fink and other such leading corporate figures is not to discount the famous position of Milton Friedman in the 1970's that "*the social responsibility of business is to increase its profits.*" The new breed of corporate leader is arguing that the surest way to increase profits in a way that lasts is through having this ESG lens on now only what they do as a company but how they do it.

They are joined in this move by some of the largest pension funds in the world. Take the Norwegian Government Pension Fund Global, the largest sovereign wealth fund in the world, with over $1.4trillion of assets under management which has steadily been ramping up its divestments based on ESG criteria, seeking to replace them with opportunities that make a positive impact as well as generate long term returns for shareholders.

In 2022/2023, Norges Bank Investment Management which manages the fund actively divested from 74 companies on the basis of risk and participated as an active shareholder in close to 12,000 more. Writing in February 2023 in their Annual Report, CEO of the Fund said *"ESG was increasingly portrayed as political during the year [2022]. We find this worrying. Responsible companies know the environmental and social consequences of their operations, pursue opportunities and address risks. This is simply good business management. For me, ESG is not politics – it is common sense. We integrate ESG considerations into our analyses in order to make better investment decisions. This is how we build wealth for future generations."*[161]
We have seen a similar story with other major European nations. Take the Dutch pension funds, such as the Civil Service Pension Fund ABP and healthcare focused scheme PFZW, which have been leaders in adopting ESG criteria into investment processes. Both have made headlines of late with significant divestment moves of their own. In 2022, PFZW sold its stakes in 24 companies over ESG failures and followed that up in 2023 with the divestment

158 "The Impact of a Corporate Culture of Sustainability on Corporate Behavior and Performance" by Robert G. Eccles, Ioannis Ioannou, and George Serafeim, Harvard Business School, 2014, www.shorturl.at/oPRW6

159 "How ESG Affects Equity Valuation, Risk and Performance," MSCI Research, 2017, www.msci.com/www/research-report/foundations-of-esg-investing/0795306949

160 "Larry Fink's 2022 Letter to CEOs," https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter

161 "Responsible Investment: Government Pension Fund Global 2022," Norges Bank Investment Management, February 2023 https://www.shrunken.com/aqL6t

of €303m of shares after companies failed to set out their commitments to the Paris Climate Agreement.[162] Whilst PFZW has focused their activism on the energy companies, ABP have sought to take action where it hurts by targeting the banks that finance such companies, seeking to develop a full-court press for change.[163]

Those investors who have already made moves in this direction proudly display their success and track record in doing so. Intermediate Capital Group – better known as ICG – is a global alternative asset manager that seeks to create sustainable value by partnering with ambitious businesses. With $74.5bn total assets under management, it counts a live relationship within the fitness industry within its portfolio, having made available €200m to support the operation and growth of GO fit in 2019. The social impact of GO fit – estimated by PWC as close to €300m in 2019, is proudly displayed by ICG within its sustainability report as a company, which also highlights how sustainability considerations drove the actions of GO fit throughout the pandemic and accelerated its recovery as a business.[164]

In the years to come, we may well see this agenda developed even further, with greater opportunities for the health and fitness sector. Legal & General is the UK's largest player in this space with £1.4 trillion in assets under management. They have been a major advocate of such a progression. They argue that ESG has lost its way, where companies such as processed food manufacturers are able to game the system to position themselves within the ESG category, damaging the credibility of the entire system given its negative impact on the wellbeing of societies. Instead, they have added their weight to calls for Health to be placed on equal footing with other considerations in the ESG framework.

Legal & General CEO Nigel Wilson said in 2021 that *"the health challenge is just as urgent as the environmental crisis – and governments can only do so much. When the real weight of investors money is deployed to solve a social problem, meaningful change can happen rapidly, and that could happen with health."*[165] Perhaps we are not far from an evolution to ESHG in which health is introduced to the equation?

4.3. ESG on Trial

This agenda is of course without its critics. Famously, Elon Musk recently stated that the S in ESG stands for "*satanic*" such was the potential for manipulation of ESG criteria.[166] The highly charged political atmosphere in the U.S. is seeing ESG in the crosshairs of culture wars and claims of woke capitalism, with Ron DeSantis – a potential Republican candidate for President – taking the fight to the agenda as Governor of Florida where he has banned ESG considerations from being used in state investments.[167]

Champions of the ESG agenda have been attacked by activist investors, whether that is Larry Fink at Blackrock, or leaders within businesses. Paul Polman put sustainability at the heart of Unilever's strategy over a decade in which delivered a 300% shareholder return yet faced heated criticism that he failed to maximise shareholder returns. Alan Jope succeeded Polman as CEO clearly stating that *"brands without a purpose will have no long-term future."*

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162 "PFZW sells 24 companies over ESG failures," IP&E May 2022, https://www.ipe.com/news/pfzw-sells-24-companies-over-esg-failures/10059554.article

163 "Europe's Biggest Pension Fund Issues ESG Warning to Banks," January 2023, https://www.bloomberg.com/news/articles/2023-01-23/europe-s-biggest-pension-fund-issues-warning-to-banks-over-co2?leadSource=uverify%20wall

164 "Responsible Investing: ESG Report 2020", ICG, 2020 - https://www.icgam.com/wp-content/uploads/2022/02/ICG-2020-ESG-report.pdf

165 "It's time for ESG to incorporate health," Nigel Wilson, 2021, Fortune, fortune.com/2021/08/25/esg-companies-health-reporting-legal-general

166 https://www.foxbusiness.com/technology/musk-rips-satanic-esg-world-economic-forum-controversial-investment-regime

167 "Governor Ron DeSantis Announces Legislation to Protect Floridians from the Woke ESG Financial Scam," February 2023, https://www.flgov.com/2023/02/13/governor-ron-desantis-announces-legislation-to-protect-floridians-from-the-woke-esg-financial-scam/

Nonetheless, he has faced loud calls to rebalance the focus of the company and stop being "obsessed with publicly displaying sustainability credentials at the expense of focusing on the fundamentals of the business."[168]

Some might say that the term ESG itself has run its course and needs a regeneration suitable for the level at which it has reached which makes clear that there is no trade-off between the drive for commercial success and the desire to make a positive impact in the world in which you operate.

Despite the turbulence, the evidence remains clear that over the long term, companies perform better when driven by purpose to operate in a way that safeguards its ability to deliver long term value to shareholders. The empirical evidence on the topic states that companies that care about the environment, people and how they are run usually do better than companies that don't. They have higher returns which means more money. They also have less risk of losing money. Which is good.[169] And if that's not motivating enough, 59% of investors surveyed by PWC say that a lack of action on ESG issues makes it likely they would vote against an executive pay agreement, whilst a third say they've already done so![170]

As a result, this agenda will continue to matter to those investors that want to operate with this long-term view in mind, and it is these investors that have the greatest potential to support the long-term resourcing needs of the sector.

4.4. ESG within fitness – forming a plan…

For companies operating in the sector, this agenda is here to stay and now a core business function – as we have seen by its increasing profile in the investor facing materials of the leaders of the market.

The arguments for doing so are widely understood – whether it is reducing risk, differentiating their brand profile with customers, improving their corporate reputation, or indeed attracting a higher quality nature of investor providing a lower cost of capital.

It is clear also that the health and fitness sector could prove attractive to such ESG minded investors. We are in a sector which has fantastic macro dynamics behind it, with demand being stimulated by greater degrees of health awareness and the growing prevalence of chronic diseases. Clearly the sector has great potential to address some of the most pressing societal challenges faced across the globe in a meaningful way.

Companies that embody this have a chance to differentiate themselves at all levels and have the potential to deliver long term sustainable financial returns for investors, who can sleep easily at night knowing that the company is well managed and operated with full regard of all stakeholders. Those investors who are aligned on a more values-based approach will be drawn to the attractiveness of companies operating in this way across the sector.
What can we do to help fuel this opportunity and trend? There are actions that can be taken at the company and sector wide level – both nationally and internationally.

First, each company must build their own map of the criteria around environmental, social and governance related

168 "Unilever under pressure to show sustainability focus is good for business," February 2022, https://www.reuters.com/business/retail-consumer/unilever-under-pressure-show-sustainability-focus-is-good-business-2022-02-09/

169 Gunnar Friede et al., "ESG and financial performance: Aggregated evidence from more than 2000 empirical studies," ***Journal of Sustainable Finance & Investment***, October 2015, Volume 5, Number 4, pp. 210–33; Deutsche Asset & Wealth Management Investment; McKinsey analysis in McKinsey Quarterly, November 2019, https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Strategy%20and%20Corporate%20Finance/Our%20Insights/Five%20ways%20that%20ESG%20creates%20value/Five-ways-that-ESG-creates-value.ashx

170 "PwC's Global Investor survey: The economic realities of ESG," December 2021, https://www.pwc.com/gx/en/corporate-reporting/assets/pwc-global-investor-survey-2021.pdf

matters and understand the criteria that matters to them and the investor community they have today and desire in the future. Having done so, it is essential to have a professional strategy for addressing each in turn, with specific goals and metrics that help to measure progress. The path towards Net Zero is running at different speeds in different countries and in different companies, but its an example of just one objective on which companies are expected to have a clear point of view.

Second, it is essential that each company completes its own materiality assessment to analyse the main risks and opportunities of each company, to identify where the most significant impact might lie, and to help prioritise the action plan.

From that point, there is the opportunity to set measurable goals, which are realistic and achievable, yet still serve to motivate. There is already new within the sector of such goals featuring within the KPIs and incentive plans of executive teams. The more integrated these goals to the core activities of the company, the better.

Putting in place a reporting framework naturally follows. Whether it is a regulatory requirement within the country you operate, an expectation of investors, a form of brand marketing or other factor that might influence the decision to do so, companies are increasingly expected to act with transparency on their process.

Such reporting frameworks give us the basis to drive engagement with stakeholders at all levels – from current or desired investors, to customers, employees, community members or civil society actors – to demonstrate the commitment to the agenda, the progress being made and identify opportunities for improvement. The ESG agenda provides a rich basis for strategic partnership development with major brands, governments, and civil society actors in that it can serve as a platform for partnerships, a launchpad of new forms of collaboration.

This is enhanced greatly by taking a further leap which is to secure third party verification of the process that you have been through as a company. This agenda is bedeviled by a lack of trust and credibility in the claims made by companies, with accusations of greenwashing commonplace. Might we see it within fitness, with some brands health-washing their operating strategies to claim their ability to deliver health benefits to segments of the community that operationally they are fundamentally not set up to serve? To tackle such accusations, it is valuable to consider what measures might be taken to enhance the robustness of what is produced outlining the progress being made.

It is here where EuropeActive has the greatest opportunity to assist and play a role. The attractiveness of the sector to major investors has long been a topic of debate in the market, given long memories of overpromises passed in previous generations of the sectors evolution. The market is not helped by a lack of transparency on performance data and a general perception that most industry reports are not worth the paper they are written on given their lack of independent verification and trustworthiness.

Herein lies the great opportunity within the area of ESG and quantifying the positive social impact of the leading companies in the market and the sector as a whole. Given this is something that creates resourcing pressures and challenges at a European level, our sector may start to consider creating common standards and approaches to reporting that align the reports that are created across the sector by its leading companies. A common framework approach, with suitable sensitisation to the social impact values in individual markets, would help operators across the industry to build credibility into their reporting framework and ensure valid comparisons are made when benchmarking impact across the sector.

Adapting a framework which has the backing of international policy actors, such as the European Commission or World Health Organisation, will further enhance credibility.

Greater transparency and robustness around the veracity of the data published about the sector will build investor trust and credibility and help us gain the credit we deserve for the health, happiness, and wellbeing that we create in the communities we serve.

Demonstrating our social impact and ESG credentials in a credible way will position our sector as a driving force of a more sustainable world and place us in the spotlight of those that share the goal of achieving that objective.

#5. Everything is about numbers… Understanding the key methodological issues to deliver high-quality and robust evidence

5.1. The THiNK Active International Consensus on Social Return of Investment modeling for physical activity and sports participation project: Striving for Global Consensus on the Social and Economic Value of Sport and Physical Activity

As discussed previously, there is a growing demand globally, for policy makers, practitioners, and academics to measure the broad benefits of sport and physical activity at the individual, community, and population level. Whilst some benefits of physical activity and sport have been evidenced through research, often these benefits have focused on physical health, with limited high-quality evidence on the wellbeing and social benefits quantified at scale. This is due to significant research gaps but also due to a lack of global consistency of what benefits to assess and a lack of robust tools and methods to accurately measure associated outcomes. In response to the growing need to advocate for the broad benefits of Sport and Physical Activity, we urgently need to understand the social benefits and value of participation.

Aims of this unique project:

Strive for global consensus on how to define, measure and articulate the social benefits and value of active societies. The identification of clear research priorities and the sharing of community practice will strengthen future advocacy for a more active world. Looking ahead, we must revolutionize the way in which we all quantify the value and contribution of sport and physical activity to global social and economic outcomes.

We recognize the challenging nature of this unique project but are fully committed to provide the best available evidence and address the most significant issues (involving experts across the world and applying a solid methodology and process) to offer all stakeholders involved in physical activity and sports participation the fundamental tools to measure and value the wider benefits of those to society.

In summary, and as previously highlighted by Davies et al. (2019), the purpose of this project is: "*to support the development of high-quality research able to put a monetary value on the wider social impact of sport, and in doing so identify and inform policy makers of the relative importance of different social outcomes to society. It seeks to apply an existing approach to social impact measurement, in a new sector-wide context, discussing it broadly and extensively with stakeholders and experts globally, with the aim of achieving results which are as robust as possible, while being careful not to overclaim*".

Expected outcomes:

We are expecting to achieve an *International Consensus on SROI and Economic Impact Assessment of Physical Activity and Sports Participation*, that will be published as an open access resource at an independent peer-reviewed

scientific publication[171]

Further development of the project should enable the development of specific SROI toolkits for different stakeholders to facilitate SROI and economic assessments and successful implementation.

And if we look at this strategically, this project is about uniting and empowering stakeholders around one shared goal… A world first solid approach to show the value for society of our incredible industry.

But, what is Social Return on Investment (SROI)?

As described briefly by Davies and colleagues (2019), "*Social Return on Investment (SROI) is a framework used for understanding, measuring and valuing net social impacts of an activity, organisation or intervention (Nicholls et al., 2012172). SROI is increasingly used across a range of policy areas, especially by public agencies and third sector organisations, to measure and value social impacts and to justify public investment (Fujiwara, 2014173). It is also used by organisations to understand where activities create social value and as a strategic tool for planning and maximising social value in the future*".

The SROI approach was developed from cost-benefit-analysis (CBA), together with sustainability accounting and financial accounting (Social Value UK, 2014[174]). Nicholls et al. (2012) define it as "*a framework for measuring and accounting for [the] broad concept of value; it seeks to reduce inequality and environmental degradation and improve well-being by incorporating social, environmental and economic costs and benefits*".

Davies and colleagues (2019) go deeper on their definition of SROI and highlighted that "*it offers an approach to social impact valuation which is guided by seven clear principles and a standardised framework. It is transparent, conservative, and only includes material outcomes, namely those that if omitted, would affect the decisions of stakeholders. The SROI framework is built on a theory of change model and a commitment to valuing and monetising outcomes. It uses a wide range of methods for valuing, including preference and well-being valuation methods from CBA and financial metrics used in accounting (Fujiwara, 2014). SROI analysis expresses the value of the social outcomes created in relation to the cost of achieving them, as a single monetised SROI ratio. A further merit of the SROI approach is that it provides a platform for meaningful engagement of multiple stakeholders, enabling the measurement of outcomes that matter to the people affected by an intervention, organisation or policy (Banke-Thomas et al., 2015175; Vardakoulias, 2013176)*".

In summary, "*SROI approach monetises value using a common metric, which enables multiple outcomes (and inputs) across different social impacts to be valued (e.g. health, crime, etc.). It also enables a singular monetary ratio to be calculated, which captures positive and negative outcomes, and illustrates a clear and easy to understand return on investment (Fujiwara, 2014). Table 2 at the following page presents a comparison of SROI with traditional economic evaluation frameworks included at an interesting critical review by Banke-Thomas et al. (2015). It is important to note the engagement of key stakeholders as one of the differential elements of the model*" (Davies et al., 2019).

171 Part of a special Research Topic focused on SROI at ***Frontiers in Sport and Active Living*** with publication fees of accepted papers fully funded by EuropeActive. More information: https://www.frontiersin.org/research-topics/49217/understanding-and-assessing-the-social-value-of-sport-and-physical-activity

172 Nicholls, J., ***et al.,*** 2012. ***A guide to Social Return on Investment***. The SROI Network.

173 Fujiwara, D., 2014. ***A short guide to social impact measurement***. Simetrica.

174 Social Value UK., 2014. ***SROI and cost benefit analysis: Spot the difference, or chalk and cheese?***. Available from: http://www.socialvalueuk.org/resource/sroi-and-cost-benefit-analysis/

175 Banke-Thomas, A.O., Madaj, B., Charles, A. ***et al.*** Social Return on Investment (SROI) methodology to account for value for money of public health interventions: a systematic review. ***BMC Public Health*** **15,** 582 (2015). https://doi.org/10.1186/s12889-015-1935-7

176 Vardakoulias, O., 2013. ***Economics in policy-making 4: Social CBA and SROI***. New Economics Foundation. Available from: http://www.nef-consulting.co.uk/wp-content/uploads/2014/10/Briefing-on-SROI-and-CBA.pdf

Table 1 Comparison of SROI with traditional economic evaluation frameworks

Cost-Effectiveness Analysis (CEA)	Cost-Utility Analysis (CUA) Sub-type of CEA	Cost-Benefit Analysis (CBA)	Social Return on Investment (SROI)
Main objective			
To compare costs and impact of alternatives within the same domain	To compare costs and impact of alternatives within the same domain	To assess if an intervention is worth the investment.	To assess if an intervention is worth the investment.
Costs			
Monetary value	Monetary value	Monetary value	Monetary value
Benefits			
Benefits linked to health improvements.	Benefits linked to health improvements.	Captures health and non-health impacts.	Captures health and non-health impacts, underpinned by the "triple bottom line" approach (social, economic and environmental). In addition, seeks to account for and value potential negative effect of interventions.
Reported as natural units\E.g. lives saved or cases averted	Reported as Quality Adjusted Life Years (QALYs) gained/ Disability Adjusted Life Years (DALYs) averted/ Healthy life-years gained	Reported as monetary value or welfare benefit Lists benefits that cannot be easily monetised and explains why they cannot be monetised	Reported as monetary value or welfare benefit Uses financial proxies to estimate monetary value of benefits that cannot be easily monetised
Level of application			
Intervention level	Intervention level	Usually intervention level	Intervention, project, programme, policy or organisation level
Timeline of analysis			
Retrospective or Prospective	Retrospective or Prospective	Retrospective or Prospective	Retrospective or Prospective
Discounting of future value			
Yes	Yes	Yes	Yes
Stakeholder engagement			
No	No	No	No
Theory of change			
No	No	No	No
Main output of analysis			
Incremental Cost-effectiveness Ratio (ICER)	Incremental Cost-Effectiveness Ratio (ICER)	Benefit-Cost Ratio (BCR) Economic Internal Rate of Return (EIRR) Net Present Value (NPV) Break-even point	Social Return on Investment Ratio Net Present Value (NPV) Payback period
Interpretation of main output of analysis			
Intervention with higher cost-effectiveness ratio is better	Intervention with higher cost-effectiveness ratio is better	BCR > 1 is worthwhile investment	SROI ratio > 1 is worthwhile investment
Relevance			
Priority setting and resource allocation	Priority setting and resource allocation		Priority setting Resource allocation Stakeholder relationship building, Accountability framework, Management tool

Table #2: Comparison of SROI with traditional economic evaluation frameworks (Banke-Thomas, 2015)

The project step-by-step

#1. We launched formally the project at a dedicated Symposium within the ***International Conference of the International Society of Physical Activity and Health (ISPAH)*** at Abu-Dhabi last October 2020.

#2. We appointed mid-November a ***Senior Research Fellow, Dr. Ines Nieto, at THiNK Active*** to support the development of the Consensus and deliver the full data analysis, once the project is completed and the European DataHub is collecting participation data across EU.

#3. We have developed and launched late 2022 a monographic ***Research Topic focused on SROI at Frontiers in Sport and Active Living***, with publication fees of accepted papers fully funded by EuropeActive. This research topic will support and encourage the further development of high-quality research which monetises the wider social impact of sport, with a view to informing policy makers of the importance of social outcomes to society. We seek to bring together scholars, stakeholders and global experts to establish an approach to social impact measurement, which is robust, while being careful not to overclaim.

The Frontiers RT will publish contributions (systematic and critical reviews and original research articles) based on approaches and experiences of measuring the social value of sport and physical activity from three diverse perspectives: Research, Industry and Government. All publications included in this RT will be published as an open access e-book by the end of 2023.

Collectively, RT authors will challenge our current perceptions of how social value is measured and provide evidence informing a collective effort to achieve global consensus on the social value of active societies.

To access more detailed information please visit the following link:

https://www.frontiersin.org/research-topics/49217/understanding-and-assessing-the-social-value-of-sport-and-physical-activity

#4. We secured the ***formal involvement of WHO Physical Activity Unit as approved External Observer*** at the project, with an allocation of WHO health economist consultant, Dr. Andreia Santos, to support the development of a robust methodology for the assessment of healthcare cost reduction.

#5. We hosted a ***First SROI Experts meeting at the Advanced Wellbeing Research Centre*** of Sheffield Hallam University (Sheffield, UK) mid-January 2023 to complete the criteria for a systematic review and meta-analysis of SROI outcomes. The systematic review protocol has been published at OSF Open Access Registries[177]

#6. We applied and secured ethics approval from King Juan Carlos University Ethics Board for the development of a Delphi Study (March 2023).

#7. We completed semi-structured interviews with international experts from the different domains included on the SROI model to inform the Delphi study design (March 2023).

#8. We will be attending a ***Second SROI Experts meeting at WHO Headquarters in Geneva*** on 25th-26th of April 2023 to approve the Delphi study protocol and survey.

177 Nieto, I., Mayo, X., Stafford, B., Davies, L., Reece, L. Mann, S., Jimenez, A. Social Return of Investment (SROI) applied to physical activity and sport: Protocol for a systematic review. Registration DOI at the Open Science Framework (OSF) Registries: https://doi.org/10.17605/OSF.IO/C8TZD

#9. We will run two rounds of Delphi consultations with experts from everywhere in the world during May and June 2023. Full analysis and interactions with experts will be done using Qualtrics.

#10. Prof. Larissa Davies and Prof. Alfonso Jimenez will deliver a Tutorial Lecture at ***2023 American College of Sports Medicine Annual Meeting*** in Denver (Colorado, US) on the 1st of June 2023, as part of the open consultation and dissemination process.

#11. A full draft of the International Consensus will be circulated to experts after completed the results analysis for review, validation, and approval by September 2023.

#12. A peer-review paper will be drafted for submission to a Q1 journal (i.e. British Journal of Sports Medicine).

#13. The International Consensus on SROI Modelling will be formally presented by Prof. Larissa Davies at the ***1st Exercise for Health Summit in Madrid*** (Spain) on the 21st of November 2023.

#14. The full ***Research Topic focused on SROI at Frontiers in Sport and Active Living*** will be published as open access e-Book early 2024.

Please see annex #1 and annex #2 for more detailed information about the project…

#6. EuropeActive solution: the European Data Hub project

The European DataHub project:

The key strategic project from THiNKactive to achieve its mission is what has been called the European DataHub (EDH). EDH, developed in partnership with 4Global[178], aims to provide EuropeActive and partners with the data and insight to demonstrate the scale, impact and value of the European Health and Fitness Market.

The EDH is a digital ecosystem that aggregates data from across the sector, to develop common data standards, to allow consistent analysis and reporting. It creates tools and systems that help organisations understand the benefit that they create through running gyms and programmes. EDH also allows gym operators and national associations to analyse and compare their performance to others across the sector, providing insights into the social value to gauge health benefits generated from physical activity. The EDH facilitates a proper evaluation of how the sport and fitness sector is having a positive impact on members, throughput, and sector growth. The EDH platform has been developed by 4Global for EuropeActive and it was launched at Cologne/FIBO last 6th of April 2022.

Figure #3 is showing how EDH works regarding data collection.

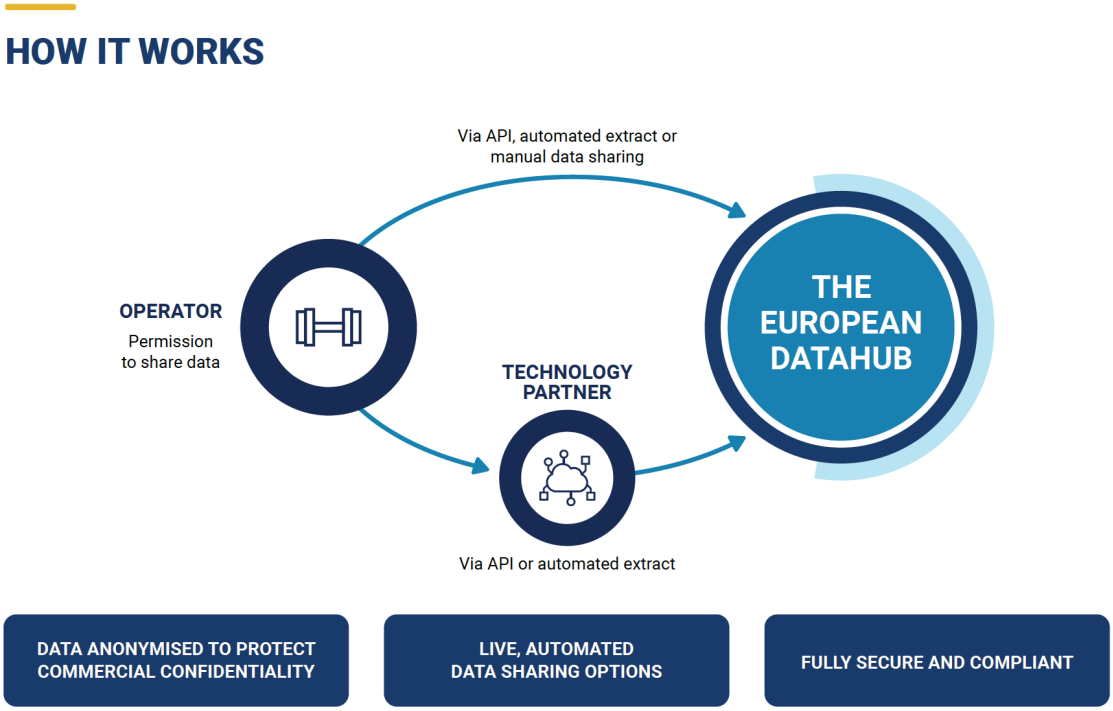

Figure #3: EDH data collection process.

178 4Global, Plc., is a UK-based data, services and software company focused on major sporting events and the promotion and measurement of physical activity. It is known in the UK for its DataHub project and the related Social Value Calculator (SVC). https://4global.com/projects/

Figure #4 briefly describes the EDH data aggregation process and insight focused areas of the project.

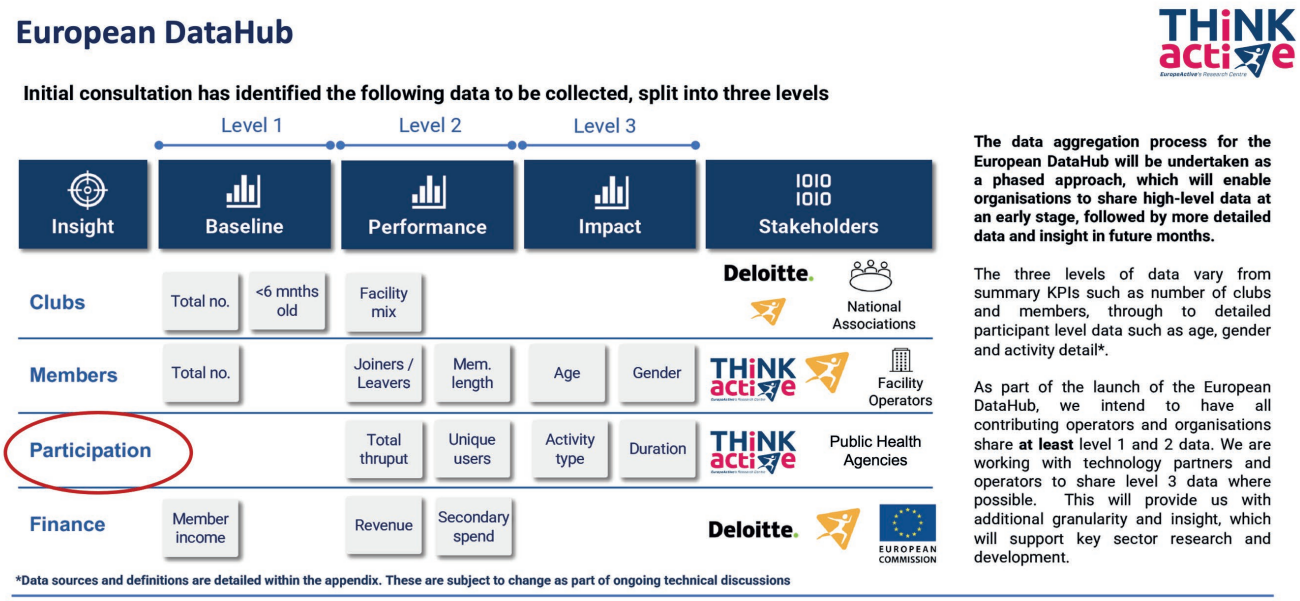

Figure #4: EDH data aggregation process and insight focused areas of the project.

Over the last year, we have already collected data from about 10 million members across over 3,000 clubs from across the continent.

Through improved insight and data, we are building the research and knowledge-base in the sector to benefit all parties:

- Commercial organisations looking to grow market share.
- Not-for profit bodies looking to work with specific participant groups.
- Partnering with world-renowned organisations and academics to underpin global research projects through THiNKactive.

It is expected that the International Consensus on SROI and Economic Impact Assessment of Physical Activity and Sports Participation will inform the full data analysis of the EDH Participation area as the project evolves and consolidates.

#7. Closing Remarks

Within this extensive report we have tried to offer you the critical information to understand our incredible value impacting society in a positive way.

Based on the most updated evidence, we have analysed the policy context and its implications, we have helped you to discover the different areas and domains in which our industry is making a positive impact in society with particular focus in health-care savings from better physical and mental health, macroeconomic positive impacts, academic achievement and individual capital development, social cohesion and crime prevention, and subjective wellbeing. Moreover, we have discussed our industry positioning regarding environment, governance, and sustainability (EGS), and its implications to access to capital investment. We have alsointroduced you into the amazing world of understanding the key methodological issues to deliver high-quality and robust evidence regarding social value (because everything is about the numbers…). And finally, we have presented to you the European DataHub project.

Within this document, you will have had time to reflect on the information presented. In turn, this is likely to have developed and informed your understanding of the value and impact of our industry.

We face a unique opportunity to engage all industry stakeholders in a new transformative journey about our impact and value for society…

Your next step is to be formally engaged in the European DataHub, sharing high-quality data so we can provide insights, benchmarks, and a solid body of evidence to inform policy and interact with Governments and society as a proactive, responsible and sustainable industry….

Are you ready for the future….?

Annex #1

Social Return of Investment (SROI) applied to physical activity and sport: Protocol for a systematic review

Nieto, I., Mayo, X., Davies, L., Reece, L.J., Stafford, B., Mann, S., Jimenez, A.

Registration DOI at the Open Science Framework (OSF) Registries
https://doi.org/10.17605/OSF.IO/C8TZD

Background: Physical activity and sport (PAS) have been related to many health and social benefits, but the corresponding monetary value of those remains unclear. The ***Social Return On Investment (SROI) model*** is a promising framework to measure the social value created by these activities. Social value includes health, social, education, well-being and environmental outcomes.

Objectives: The main aim of the systematic review will be to inform about the application of the SROI model to PAS. Specifically, it will look for the areas of impact studied under the SROI model to evaluate PAS activities, and the measurement and valuing methods used in the literature. As a secondary aim, these areas will be compared to the aims stated in government policies related to PAS.

Methods: A systematic search will be conducted on the databases of Web of Science, PubMed, and Econlit and a secondary search will be conducted to find grey literature reports and policy documents. Those articles published in English, measuring social value of PAS activities in monetary terms and under the SROI framework will be included. Risk of bias will be evaluated with the Drummond check-list for assessing economic evaluation.

Results: The final records will be codified based on the characteristics of the study, purpose, sample, the main elements of an SROI evaluation and main limitations of the model. A qualitative analysis and descriptive statistics will be used to present the results of each of those variables. Finally, the outcomes identified in the systematic review will be compared to the ones included in government policies of PAS.

Discussion: Given the practical difficulties of the SROI model, it is expected to find lack of consensus regarding the valuation of outcomes. Moreover, most of the research is expected to come from the grey literature and with lower quality than peer-reviewed studies.

This systematic review is the first step to a Delphi study to find expert consensus on the areas of impact of PAS and the way to measure and value them. The final output of both studies will be the design of a toolkit for organizations, professionals, and policy-makers on how to measure the social impact of PAS in order to show the relevance from a societal point of view of keeping an active living.

Annex #2

Consensus on a Social Return on Investment model of Physical Activity and Sport: A Delphi study

Nieto, I., Mayo, X., Davies, L., Reece, L.J., Strafford, B., Mann, S., Jimenez, A.

Abstract

Background: Physical activity and sport (PAS) have been related to many health outcomes and social benefits. However, given the lack of scientific-based evidence about the monetary impact of these benefits, PAS are not included in the main agenda of public policies. The main aim of this research is to build a Social Return On Investment model of PAS based on experts' opinion to clarify the domains of impact and translation into monetary terms.

Methods and Analysis: A three-round Delphi method will be employed. During the preparation phase, a systematic review on the SROI framework applied to PAS and initial interviews with experts will be conducted. The initial interviews will be analysed using a reflexive thematic analysis to inform the development of the statements used in the Delphi survey. Based on previous studies on the Social Return On Investment model of PAS, five main domains of impact are anticipated to form the Delphi survey questions: 1) physical health, 2) subjective well-being, 3) education, 4) community/social resources, and 5) economic resources. Environmental outcomes and negative impact may also be explored. Then, iterative rounds of communication with the expert panel will be conducted via Qualtrics. Participants (around 15-20 experts per subject area) will need to complete a first round survey with statements related to the domains, measurement, and financial proxies of social impact of PAS. They will need to indicate their level of agreement with each statement on a five-point Likert scale (strongly agree, agree, disagree, strongly disagree, don't know). Then, during the second and third iterative rounds separated by 2 weeks, experts will reappraise the statements and will be provided with a summary of the group responses from the panel. A statement will have reached consensus if ≥70% of the panel agree/strongly agree or disagree/strongly disagree with all of the statements. It is anticipated that data collection will be conducted during 2 month time frame.

Discussion: The final goal of this project is to reach expert consensus on the areas of social impact of PAS and the way to measure and value them. This aim will result in the design of a toolkit for organizations, professionals, and policy-makers on how to measure the social impact of PAS to show the relevance of keeping an active living and to justify the investment on these activities.

Ethics and Dissemination: This study has been evaluated and approved by the Ethics Board of King Juan Carlos University and data will be treated following the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Results will be disseminated via scientific articles, reports, and presentation in scientific congresses.

Annex #3:

THiNKactive[179]:

Established in September 2020 by the Board of Directors of EuropeActive, and supported by the President´s Council for Operators, THiNKactive is the new Research Centre of EuropeActive, a unique project to provide evidence and promote best practices for the fitness and physical activity sector across Europe and beyond. The European Fitness and Physical Activity sector is committing resources in the development of the evidence-base supporting our capacity to deliver meaningful and sustainable public health outcomes.

THiNKactive mission:

"*To champion a fundamental transformation in the way in which policy makers and the public perceive the value and contribution of the fitness and physical activity sector to social and economic outcomes*".

THiNKactive aims to connect its coming ***research outcomes and evidence*** into ***practical applications of advanced knowledge***, transforming and evolving the overall sector current ***professional practice***.

The structured and reliable dissemination of our value and impact will make THiNKactive the ***biggest and strongest asset for the whole fitness and physical activity sector***, by closing the GAP between evidence and real-life impact for each of the stakeholders serving the public in our world.

THiNKactive Scientific Advisory Board

The journey building up our visibility and credibility is moving forward with a key milestone, the establishment of an independent Scientific Advisory Board, named THiNKactive Scientific Advisory Board (SAB). The SAB brings together a pool of academic and industry experts with credibility, visibility and interest in our research development and its impact in society.

SAB Chair:

- Prof. Larissa Davies, Sheffield Hallam University (UK).

Academic/Research-based members:

- Prof. Daniela Caporossi, Università di Roma Foro Italico (Italy).
- Dr. Lindsey J. Reece, University of Sydney (Australia).
- Dr. Anna Szumilewicz, Gdansk University of Physical Education and Sport (Poland).
- Prof. Paolo Caserotti, University of Southern Denmark (Denmark).
- Prof. Willem van Mechelen, Vrije University (Netherlands).
- Dr. Matthew Wade, Head of Research, ukactive Research Institute (UK).
- Prof. Gary Liguori, University of West Florida (US), link role to ACSM.

179 https://www.europeactive.eu/news/europeactive-successfully-launches-its-think-active-project

Industry-based:

- Dr. Steve Mann, 4Global (UK).
- Dr. Niels Nagel, DIFV (Germany).
- Dr. Silvano Zanuso, Wellness Foundation & Technogym, Research Department (Italy).

Secretary:

- Dr. Xian Mayo, Centre for Sport Studies, King Juan Carlos University (Spain).

Observer:

- Julian Berriman, EuropeActive Professional Standards Committee (Belgium).

THiNKactive team:

- Prof. Alfonso Jimenez, Head of THiNKactive, Centre for Sport Studies, King Juan Carlos University (Spain).
- Dr. Ines Nieto, Senior Research Fellow, Centre for Sport Studies, King Juan Carlos University (Spain).

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Avenue des Arts /Kunstlaan 43,
B-1040 Brussels, Belgium

T: +32 (0) 2649 9044
www.europeactive.eu

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EuropeActive's Research Centre

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EuropeActive's President's Council Members and the fitness and physical activity sector is committing resources to the development of evidence- based research supporting its capacity to deliver meaningful and sustainable public health outcomes.

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